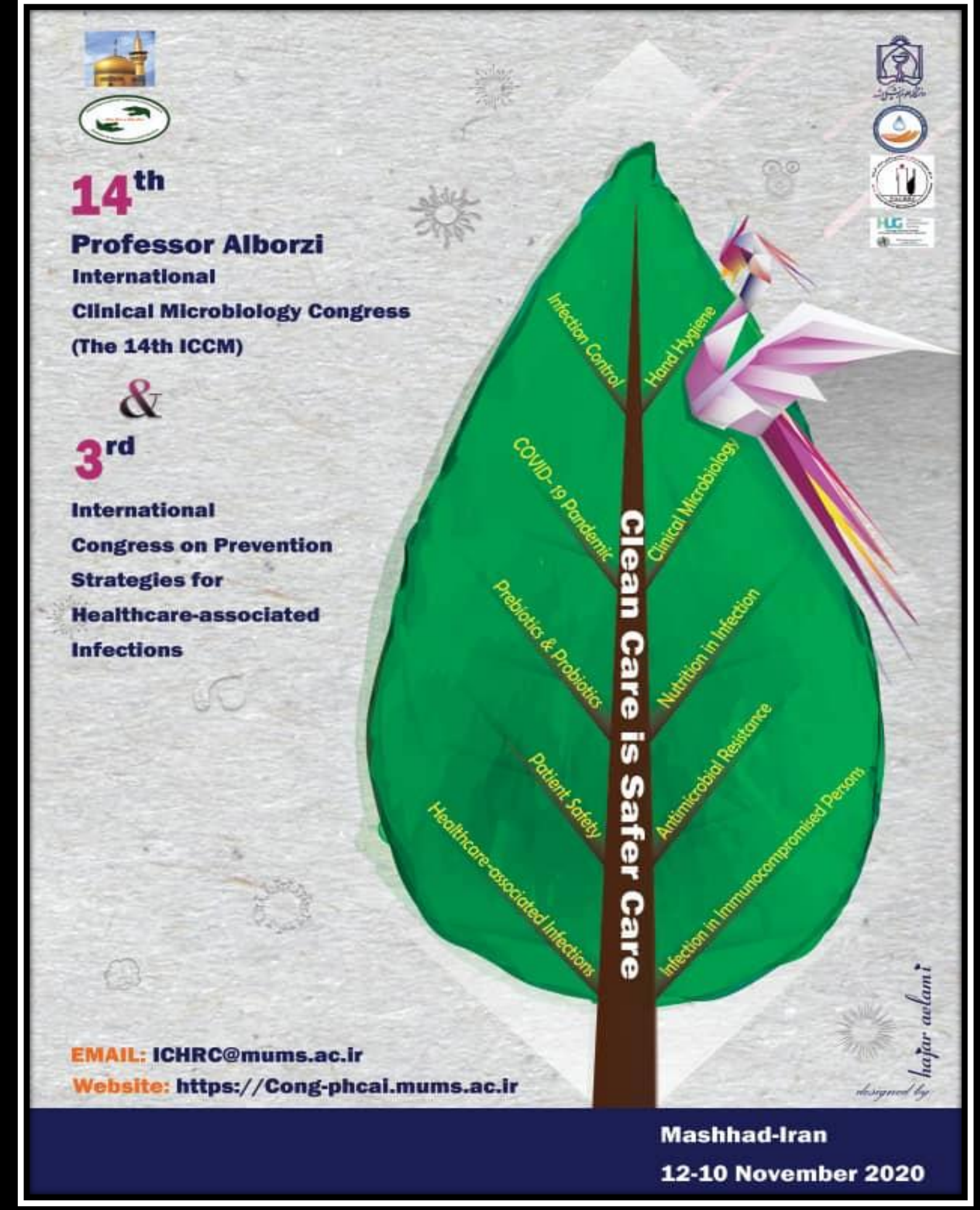
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Sepsis- Improving the Prevention, Diagnosis and Clinical Management on a Global Scale

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President Global Sepsis Alliance; Charité Berlin Germany.

ARTICLEINFO

Oral

Key words:
Clinical management, Diagnosis, Prevention, Sepsis.

ABSTRACT

Introduction:
Sepsis is a life-threatening condition that arises when the body's response to an infection injures its own tissues and organs. It can be a life-changing and disability-inducing event, resulting in considerable financial burden for healthcare systems (1-3). An estimated 11 million people die and 38 million survive sepsis each year. Many survivors experience persistent health problems, including new or worsened physical, cognitive, and/or psychological impairments. Given, that sepsis is a major global health problem and based in an initiative by the Global Sepsis Alliance, which was supported by the German Government and a number of other WHO/WHA member states, the Seventieth World Health Assembly passed a resolution in 2017 to help combat this major global health threat problem. Which is currently highlighted by the COVID-19 pandemic. This resolution URGES Member States:

- to mandate the inclusion of prevention, diagnosis and treatment of sepsis in national health systems strengthening, in the community and in health care settings, according to WHO guidelines;
- to develop, and implement, and/or strengthen standard and optimal care and strengthen of medical countermeasures for diagnosing and managing sepsis in health emergencies, including outbreaks, through appropriate guidelines with a multi-sectoral approach;
- to increase public awareness of the risk of progression to sepsis from infectious diseases, through health education, including on patient safety, in order to ensure prompt initial contact between affected persons and the health care system
- to develop training for all health professionals on infection prevention and patient safety, and on the importance of recognizing sepsis as a preventable and time-critical condition with urgent therapeutic need, and of communicating with patients, relatives and other parties using the term "sepsis" in order to enhance public awareness
- to engage further in advocacy efforts to raise awareness of sepsis, in particular through supporting existing activities held every year on 13 September in Member States

and requests the WHO Director-General:

- to develop WHO guidance including guidelines, as appropriate, on sepsis prevention and management;
- to collaborate with other organizations in the United Nations system, partners, international organizations and other relevant stakeholders in enhancing access to quality, safe, efficacious and affordable types of treatments for sepsis, and infection prevention and control.

The strategy of the GSA and it´s more than 100 member organizations to foster the fight against sepsis on a global scale is: a) to insure the enactment of the WHO Resolution on sepsis; b) to encourage policymakers, health care authorities and civil society to respond to sepsis with the same vigor and passion as to COVID-19 and c) to learn from countries, health systems and health care facilities with low and decreasing sepsis mortality rates.

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Antimicrobial Resistance: Challenges and Opportunities, an English Perspective

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ARTICLEINFO

Oral

Key words:
Antibiotics, Antibiotic resistance, Antimicrobial stewardship, Bacterial guidelines, Best practice, Care quality , Improvement prescribing behaviour, Public health, Public engagement

ABSTRACT

Introduction:
For many years, physicians and the public assumed that the discovery of new antimicrobial agents would outpace the ability of bacteria to mutate and develop drug resistance. Yet the development of new antibiotics has not kept up with bacterial evolution, especially since the late 1990's. At that time a multitude of pharmaceutical companies abandoned antibiotic research because of strong economic disincentives. By 2040, global vision is of a world in which antimicrobial resistance is effectively contained, controlled and mitigated. The UK's 20-year vision for antimicrobial resistance is determined to sustain its efforts to combat resistance, taking local, national and global 'One-Health' approaches across humans, animals, the environment and food, in line with global ambitions and in collaboration with other nations, partners and the international community. The action plans in new decade includes improving surveillance, developing better diagnostic tools, accelerating drug development, and improving global coordination of antibiotic resistance issues. In this presentation, We highlight the importance of population-based approaches in the UK to assess the association between antimicrobial use and AMR. Such approaches are needed to improve our understanding of the development and spread of AMR in order to inform strategies for the prevention, detection and management of AMR, and to support the sustainable use of antimicrobials in healthcare.

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Fungal Infections Diagnostic Testing, Systemic Antifungal Drugs, and Emerging Fungal Threats in 2020

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ARTICLEINFO

Oral

Key words:
Aantifungal drugs, Diagnostic test, Emerging fungal threats, Fungal infections.

ABSTRACT

Introduction:
The overall number of fungal infections is relatively small compared to bacterial and viral infections, however the incidence of these infections is on the rise and continues to be a serious threat. The mortality and morbidity associated with fungal infections is high, especially in immunocompromised transplant and oncology patients.
Candida, Aspergillus, Pneumocystis jirovecii, Histoplasma, Cryptococcus, and Mucorales are the main fungal pathogens causing invasive fungal infections, associated with more than 1.5 million deaths per year, worldwide. The remaining infections are largely due to a variety of fungal pathogens including Fusarium species (spp.), Lomentospora prolificans, Scedosporium spp., Coccidioides spp., and melanized fungi. Additionally, new fungal threats are emerging including multidrug-resistant Candida auris, azole-resistant Aspergillus fumigatus and numerous other cryptic fungal spp., making rapid diagnosis as well as routine antifungal susceptibility testing as a high priority in clinical microbiology practice. In the current presentation, an overall picture of fungal infections will be discussed briefly. Recent efforts to increase fungal diagnostic capacity, including direct-detection using nucleic acid amplification tests , next generation sequencing, MALDI-TOF mass spectrometry, and lateral flow assays will be highlighted. The currently available classes and representatives of systemic antifungal drugs in clinical use, as well as unmet clinical needs in the era of antifungal resistance, and new drugs with novel targets for treatment of invasive fungal infections will be described.

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COVID19 and Its Effects on Tourism

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ARTICLEINFO

Oral

Key words:
Augmented reality, COVID-19, Smart tourism, Tourism.

ABSTRACT

Introduction:
The crisis of COVID-19 has affected tourism more than ever and any other factor. One of the most important parts of health protocols is to avoid unnecessary movements and social distances with others and prevent gatherings, while the essence of classic tourism is built on sightseeing, transportation and communication, and the accumulation of visitors in tourism sites is inevitable. With the onset of the COVID-19 pandemic, policies taken in the face of this phenomenon led to the suspension of tourism activities, which has been a heavy blow to the industry and its actors. However, COVID-19 has made fundamental changes to classical tourism approaches. The rise of social media and the introduction of new technologies including augmented reality and virtual reality have been able to partially bridge the gaps created. In this regard, we can refer to the smart tourism map of Mashhad, which we use augmented reality to provide useful tourism information to the audience. Thus, useful information is transmitted to the audience while there is no conversation between the two parties that is the cause of disease transmission. This method can also replace with tour leaders who provide information to visitors in groups; that way, each tourist can visit tourist places and find information individually. COVID-19 gave new technologies the opportunity to prove their performance in a transparent and effective way. However, there are still shortcomings in achieving the full goals of tourism.

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Surveillance of multi-drug resistant organisms (MDRO) program in a University Hospital in Switzerland, evolution and adaptation

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ARTICLEINFO

Oral

Key words:
MDRO, surveillance, Switzerland.

ABSTRACT

Introduction:
Antimicrobial resistance is a global threat and a challenge for clinical care. The surveillance of MDRO in health care settings becomes a key element in the prevention of hospital associated infections (HAI) and control of the spread of MDRO. For almost 3 decades, controlling MRSA has been a challenge in our institution, particularly after the introduction of a very hyper-endemic clone in 1999. Here it is described the surveillance program, from the beginning when the efforts were oriented towards the containment of MRSA, to the reinforcement of surveillance to other MDRO, particularly gram negatives. The multifaceted prevention program, included active screening, decontamination, a computerized alert system for the identification of colonized or infected patients, surveillance, contact isolation, and a hospital-wide hand hygiene promotion campaign with periodic compliance audits and feedback. A close collaboration with the bacteriology laboratory is essential. It also describes the introduction of an educational campaign of all hospital personnel, not limited to health care workers. The feedback given to the different departments through periodic reports based on HH audits; validated MDRO surveillance data (incidence rates of HAI or colonization rates; MDRO bloodstream infections (BSI) analysis and reports on outbreak investigations is very important, but is not enough. The health care facilities need to constantly update and re-adapt the measures, combining vertical and horizontal strategies to face new challenges coming from the community, such as the increasing prevalence of extended-spectrum β-lactamase producing Enterobacteriaceae (ESBL-E) and later on, the carbapenem resistant gram negative rods, including Enterobacteriacea and non-fermentative, and other future challenges.

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Urinary Polyomavirus: Novel biomarker of congenital ureteropelvic junction obstruction

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ARTICLEINFO

Oral

Key words:
Fetal hydronephrosis, Polyomavirus, Ureteropelvic junction obstruction

ABSTRACT

Introduction:
Background Pregnancy is associated with reactivation and transmission of latent polyomavirus to fetus. Polyomavirus is also known to cause ureteral stenosis and hydronephrosis. Objective The aim of this study was to investigate whether the urinary polyomavirus could be used a potential biomarker in newborns with ureteropelvic junction obstruction (UPJO). Study design: Urinary polyomavirus virus was measured by PCR in 42 newborn infants with fetal hydronephrosis history. Random urine samples were obtained from newborns immediately after birth and from their mothers at the time of delivery. Results were compared with 25 healthy infants matched for gestational and postnatal ages. The diagnosis of UPJO was established by diuretic renal scintigraphy. UPJO was graded according to the Society for Fetal Urology (SFU) classifications. Results: The urine samples of healthy infants showed no detectable Polyomavirus. No statistically significant difference was found in the median urinary polyomavirus level between grade 1 (1000 copies/mL) and grade 2 (1500 copies/mL) UPJO infants. When the median urinary BKV values were compared for each grade of UPJO patients with grade 3 and 4 had significantly higher urinary polyomavirus levels than those with grades 1 or 2 ($P<0.001$). There was a strong correlation between the median polyomavirus in the urine of pregnant women and the urine of newborns with UPJO ($P<0.001$). Conclusion Urinary polyomavirus biomarker is a potential biomarker of UPJO in newborn with fetal hydronephrosis.

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Invasive Mucor Mycosis, A matter of concern during COVID 19 Pandemic

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1. Mashhad University of Medical Sciences

ARTICLEINFO

Oral

Key words:
COVID- 19, early diagnosis, Mucormycosis, Mucorales.

ABSTRACT

Introduction:
Mucormycosis also called Zygomycosis is a life-threatening mycotic disease caused by several species of zygomycete molds, so called mucormycetes; usually occur in individuals with impaired immunity. The common responsible Mucorals are species of the genera Mucor, Rhyzopus and Rhyzomucor, but species of other genera including Cunningham Ella , Apophysomyces, Syncephalastrum, Lichtheimia (formerly Absidia) and Saksenaea, are most often implicated. Different clinical forms including: Rhinocerebral, Pulmonary, Inguinal, Gastrointestinal, Cutaneous etc.., occur in association with underlying diseases or risk factors. The examples are: Diabetic Ketoacidosis (DKA), Neutropenia ,Hematological Malignancies, hematopoietic stem cell transplant and solid organ transplant recipients, AIDS, Sever Burns, Malnutrition, Low birth weight and Long-term use of steroids, deferoxamine etc. COVID-19 patients with trauma, diabetes mellitus, GC use, HM, prolonged neutropenia, allo-HSCT, SOT are more likely to develop mucormycosis. Because of its rapid progression and high mortality, early diagnosis and aggressive treatment especially during COVID 19, offer the only chance to increase the survival rate. Since, early initiation of antifungal therapy is beneficial in the outcome of invasive mucormycosis; therefore, development of improved diagnostic methods should become an important goal to study. Early diagnosis of invasive mucormycosis can be achieved by: Early diagnosis of invasive mucormycosis is highly recommended in patients with underlying diseases and predisposing factors. It can be achieved by: Recognition of host factors, Careful assessment of clinical manifestations, early use of CT and MRI, expert evaluation of histological and cytological preparations, optimal use of clinical microbiological methods and implementation of advances in molecular detection.

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COVID-19 Update

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ARTICLEINFO

Oral

Key words:
COVID- 19,
Neurocognitive Function,
Prevention

ABSTRACT

Introduction:
Not all patients with SARS-Cov2 infection who leave the hospital will return to 100% of their baseline emotional and neurocognitive function. Health care systems around the world may see in the coming years a wave of patients who present with depression, post-traumatic stress disorder, anxiety, insomnia, or psychosis as well as cognitive impairment why some people who get COVID-19 develop severe disease, and others are infected but don't notice symptoms. New research from the National Institutes of Health and other institutions suggests that some people have antibodies called autoantibodies that attack the immune system instead of attacking the virus that causes COVID-19. Others may have a genetic mutation that makes their immune system less able to fight the virus. Approximately 20% of asymptomatic people who test positive for COVID-19 will remain symptom-free over time. People with asymptomatic infection are infectious. All should be isolated and contact tracing should be started. Serology tests are unreliable for diagnosing COVID-19 unless a patient has been sick for weeks according to the guidelines because specific antiviral treatments and vaccines are still under development testing, quarantine, physical distancing, and washing hands are encouraged to prevent virus spread.

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Vaccination

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ARTICLEINFO

Oral

Key words:
COVID- 19, Herd immunity Vaccination.

ABSTRACT

Introduction:
Administration of a microorganism or virus in a weakened, live or killed state, or proteins or toxins from the organism to help the immune system develop protection from a disease; known as Vaccination is by far the ultimate achievement of mankind. Vaccination is derived from the Latin word "Vacca" meaning Cow, due to early studies of viruses and immunization on Cows. Immunity due to vaccination is largely responsible for the worldwide eradication of smallpox and the elimination of diseases such as polio and tetanus from much of the world. When smallpox was finally eradicated in 1979, it had already killed an estimated 300–500 million people in the 20th century. COVID- 19 pandemic has shed light on the significance of vaccination where all known human scientific establishment has been mobilized to develop a vaccine for it. This presentation is to discuss several important vaccines for viruses and diseases including Hepatitis, Pneumococcal, Meningococcal, *Rota Virus*, *Human Papilloma Virus* in children and pregnant mothers. Challenges in achieving herd immunity and many of the programs and initiatives to conduct mass immunization are discussed.

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The Global Point Prevalence Survey of Antimicrobial Consumption and Resistance: extension with the Healthcare Associated Infection module allowing surveillance of COVID-19 patients

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ARTICLEINFO

Oral

Key words:
COVID-19, healthcare associated infection, patients, surveillance, The Global-PPS.

ABSTRACT

Introduction:
The Global-PPS is a simple, freely available web-based tool to measure and monitor antimicrobial prescribing and resistance in hospitals worldwide (www.global-pps.com). Since 2015, this ambitious project has established a worldwide network providing quantifiable measures to assess and compare the quantity and quality of antibiotic prescribing and resistance in hospitalized adults, children and neonates worldwide. From 2020 onwards, hospitals can choose to follow the «light version» of the protocol or the «full version» including the Healthcare Associated Infection (HAI) module. The protocol has also been adapted to allow detailed analyses on COVID-19 patients. The Global-PPS complies with the WHO global action plan on antimicrobial resistance as requested by the Health Assembly in resolution WHA67.25, May 2014. The goal of the global action plan was to ensure continuity of successful treatment and prevention of infectious diseases with effective and safe medicines that are quality-assured, used in a responsible way, and accessible to all who need them. The Global-PPS tool helps achieving these goals. Up to now, nearly 850 unique institutions from 85 different countries worldwide have participated at least once in the Global-PPS. As a result, the database now includes more than 270,000 patients allowing benchmarking of hospitals from similar settings (hospital types or departments such intensive care, hemato-oncology, internal medicine and surgery), in the same country, region and time periods. There are interesting findings resulting from the Global-PPS. Penicillin with β-lactamase inhibitors, third-generation cephalosporins, and fluoroquinolones were the three most prescribed antibiotics worldwide. Carbapenems were most frequently prescribed in Latin America and West- and Central Asia. The majority of Healthcare Associated Infections occurred in Latin America and East- and South Asia. Interestingly, local antibiotic guidelines were missing for 19.2% of antibiotic courses. Iran participated to the Global-PPS in 2015, 2017 and 2019. Core indicators highlighted high rates of broad spectrum antibiotic use, prolonged antibiotic prescribing for surgical prophylaxis and rare documentation of a stop/review date for the antibiotherapy. The strength of the Global-PPS is to be found in the ability to download a standardized real-time one-point and longitudinal feedback report which can be used for local communications and presentations. Based on the collected Global-PPS data, hospitals can set quantifiable quality targets for antimicrobial prescribing, and measure the impact of interventions through repeated PPS. The data serves to improve the quality of antibiotic prescribing, education and development of local guidelines. It enhances sharing best practices, raise awareness of inappropriate antimicrobial prescribing and is further instrumental in planning and supporting local and national antimicrobial stewardship. Governments can use the Global-PPS tool to improve antimicrobial prescribing as part of their National Action Plan, which they are expected to draw up, with limited cost and investments in hospital staff.

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Frequency of Toxocariasis among Asthmatic Children in Northeastern Iran

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ARTICLEINFO

Oral

Key words:
Asthma, Antibody Children, ELISA, *Toxocara*, Western blotting.

ABSTRACT

Introduction:
Toxocariasis is a zoonotic and telluric disease caused by *Toxocara* species mostly in tropical areas. The relationship between toxocariasis and asthma has always been a subject for discussion. This study evaluated the seroepidemiology of Toxocara among asthmatic children.

Materials and Methods:
This cross-sectional study evaluated 150 children aged between 3-12 years with asthma presentations, who were referred to Dr. Sheikh Hospital of Mashhad University of Medical Sciences since April 2017 to March 2018. Serum samples were tested for the presence of anti-Toxocara antibodies using enzyme-linked immunosorbent assay (ELISA), and positive sera were confirmed by Western blotting (WB) method.

Results:
Out of 150 asthmatic patients, 2 (1.3%) and 1 (0.6%) exhibited Toxocara immunoglobulin G (IgG) antibodies responses by ELISA and both methods, respectively. Moreover, none of the patients were detected as hypereosinophilia.

Conclusion:
It seems there are no significant relationship between *Toxocara* infection and asthma in Northeastern Iran. These findings suggest the need to perform Western blotting immunodiagnosis as well as ELISA, using *Toxocara* antigens to improve human toxocariasis diagnosis in patients with asthma.

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Bilateral Pulmonary Artery, Inferior Vena Cava, and Cardiac Echinococcosis: A Rare Presentation of Zoonotic Diseases

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Mashhad University of Medical Sciences

ARTICLEINFO

Oral

Key words:
Hydatic cyst, Hemoptysis, Zoonotic diseases.

ABSTRACT

Introduction:
A 50-year-old female patient with a previous history of hydatid cyst of the liver and spleen operated 20 years ago was admitted to the emergency department due to recent exertional dyspnea and hemoptysis. The results of transthoracic echocardiography revealed severe tricuspid regurgitation and pulmonary artery hypertension (110 mmHg). A hypermobile oscillating mass was attached to the entrance orifice of inferior vena cava protruding to RA. The results of thoracic CTA revealed filling defect in RA extending toward the distal of inferior vena cava. Multiple filling defects suggested the emboli lobar and segmental branches in the lungs. the results were indicative of hydatid emboli with pulmonary hydatidosis that could be secondary to the fistulization of the liver hydatid cyst into the inferior vena cava. According to the mentioned lesions and the extension to heart and inferior vena cava, the patient was a candidate for surgical resection of the cysts from the inferior vena cava, heart, and pulmonary artery. The patient underwent a successful right-side pneumonectomy and the masses were removed However, the patient expired due to massive hemoptysis 3 days after the surgery.

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Identification and Sequencing the Causative Agents of Fungal Keratitis at the Referral Eye in Northeast Iran

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ARTICLEINFO

Oral

Key words:
fungal keratitis, Keratomycosis, Mycotic keratitis, Sequencing.

ABSTRACT

Introduction:
Fungal keratitis is a fungal infection of the cornea.This study was carried out for Identification and sequencing the causative agents of fungal keratitis presenting to the Referral Hospital Khatam Al Anbia Mashhad, northeastern Iran.

Materials and Methods
We had 39 cases of culture-proven fungal keratitis, from January 2017 to March 2018. All of the specimens examined microscopy by KOH and cultured on SCC medium. DNA extraction and DNA sequencing performed subsequently. Data were analyzed by SEGMAN software and blasted in GenBank.

Results:
In this study, a total of 536 corneal scrapings, of which 39(81.3%) were culture positive for fungi.The predominant isolates after sequencing and identification were Aspergillus flavus (35.9%) followed by Fusarium solani (15.4%), Fusarium proliferatum (12.8%), Aspergillus minisclerotigenes (7.7%), Aspergillus tubingensis (7.7%) ,Candida albicans (7.7), Fusarium falciforme (5.1%) , Aspergillus fumigates (2.6%) ,Fusarium oxysporum (2.6%) and Cladosporium herbarum (2.6%).

Conclusion:
Currently, most clinical laboratories routinely identify fungal keratitis based on traditional methods, such as culture and direct examination, but have certain limitations and can not identify in species level. Therefore, molecular techniques have been an important tool for the identification of species within the fungus genus.

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Biospecimens and Biobanking in research: with emphasis on infectious substances

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ARTICLEINFO

Oral

Key words:
Biobank, Biologic specimen, Diagnosis,Infectious sample, Prevention, Treatment.

ABSTRACT

Introduction:
Biologic specimens are nessecary for clinical researches. Biobank facilitates access to these samples.

Materials and Methods
In modern biobanks each specimen belongs to a person that determine by a barcode.There are some concerns about transporting and storage of infectious specimens.

Results:
With a biobank, many samples can be stored in one place. It is possible to share the sample with other researchers and also perform many experiments on it.Tests can be repeated many times.
There is a standard protocol for transporting and storage of infectious specimens.

Conclusion:
It is believed that the future of medical research is entirely related to biobanking.

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A novel case of COVID- 19 associated with hemolytic uremic syndrome in children

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ARTICLEINFO

Oral

Key words:
COVID- 19,HUS, Complication

ABSTRACT

Introduction:
One of the high mortality complications of COVID- 19is coagulopathy and thrombotic events. We define a novel case of COVID- 19 presented with hemolytic uremic syndrome (HUS). A thirteen years-old boy, without significant PMH referred to Mottahari hospital of Urmia with 5 days history of fever, chills, myalgia, hematemesis and melena two days before admission. He had not cough, chest pain, and shortness of breath. Although in the family history, his mother claimed to have had a dry cough for more than twenty days. Examination revealed a young ill, pale, and dehydrated patient with decreased level of consciousness, and dry lips. His vital sign were: Temp: 38 °C axillary, BP: 70/60 mmHg, PR 125/min, RR 25/min, and positive tilt test. Important Lab data were: anemia, thrombocytopenia, serum elevated BUN and Cr and evidence of hemolysis. A COVID- 19sample was sent due to the continued fever. Which were positive. Previously HUS has been associated with various viral infections. Many studies revealed association of H1N1 influenza A and influenza B infection with HUS. Although the chest CT-scan was normal, RT-PCR test were positive so we suspected COVID- 19as a primary cause of HUS in our patient. Due to peripheral blood smear and triad of anemia, thrombocytopenia, and renal failure the diagnosis of HUS was confirmed. Since the RT-PCR test was positive we conclude that the underlying cause of HUS might beCOVID-19. Therefore, it can be claimed that HUS is one of the complications of COVID-19.

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Predictors and Microbiology of Ventilator-Associated Pneumonia Among Patients with Exacerbation of Chronic Obstructive Pulmonary Disease

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ARTICLEINFO

Oral

Key words:
Chronic obstructive pulmonary disease, Pathogens, Ventilator-associated pneumonia.

ABSTRACT

Introduction:
This study was planned to assess the clinical predictors and microbiological features of VAP among COPD patients.

Materials and Methods:
This prospective study involved patients with COPD who required mechanical ventilation. Various baseline was compared between patients with VAP and without VAP. Univariate and multivariable analyses were done on the development of VAP.

Results:
The study included 120 intubated patients with age (mean ± SD) of 65.42 ± 8.61 years, duration of COPD of 8 years, and Acute Physiology, Age, and Chronic Health Evaluation score of 19.20 ± 4.41. In this cohort, 21 patients developed VAP. Multivariable analysis showed that Sequential Organ Failure Assessment (SOFA) score at admission, re-intubation, and history of previous hospitalization were independent predictors of VAP with odds ratio (95% confidence interval) of 2.54 (P=0.011), 65.95 (P=0.003), and 35.88 (P=0.006), respectively. Acinetobacter baumannii was the most frequent organism (n= 8; 54%), followed by Klebsiella (n= 5; 30%), Pseudomonas aeruginosa (n=1; 7%), and Enterobacter. (n =1;7%). All organisms were multidrug resistant .

Conclusion:
SOFA score at admission, re-intubation, and history of previous hospitalization were independent predictors of VAP. Antimicrobial therapy for VAP should cover MDR Gram-negative organisms.

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Pediatric Visceral Leishmaniasis: A Retrospective Study on the Diagnostic Tests in Southern Iran

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ARTICLEINFO

Oral

Key words:
Diagnosis, IFAT, QPCR, RK39-RDT, Pediatric visceral leishmaniasis.

ABSTRACT

Introduction:
Mainly VL patients are children under the age of 5 years. Timely, less invasive, and accurate diagnosis and treatment of the disease are necessary. This study aimed to search for a less invasive but robust algorithm on VL diagnostic tests in children.

Materials and Methods:
In this study 415 VL patients, 50 healthy children from VL endemic areas, 46 healthy individuals from non-endemic VL areas, and 47 non-VL diseases were tested using three diagnostic tests: IFAT, rK39-RDT, and qPCR.

Results:
In this study 102 suspected VL cases were positive in at least one test and were cured after receiving appropriate treatment. None of the tests detected all the patients but overall, qPCR exhibited a higher sensitivity, i.e., 92.2%, compared to IFAT, 82.4%, and rK39, 77.5%. The specificity was 100% for qPCR and IFAT (≥128) and 98.6% for rK39-RDT.

Conclusion:
qPCR alone is capable of detecting most of the VL suspected children. Serological tests like IFAT and rk39-RDT are recommended to increase the overall sensitivity of detection in patients with a negative molecular test. Combining qPCR with a serological test (IFAT or rK39-RDT) can help diagnose 98% of VL. In laboratories without molecular facilities, the combination of rK39-RDT and IFAT yield a sensitivity of 93.1% equivalent to that of qPCR.

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Evaluation of Drug Susceptibility of Aspergillus Species Isolated From Patients with Onychomycosis to Itraconazole, Voriconazole and Amphotericin B

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ARTICLEINFO

Oral

Key words:
Amphotericin B, Aspergillus*, Itraconazole,Onychomycosis, Voriconazole.*

ABSTRACT

Introduction:
Aspergillus is one of the most common etiologic agent of onychomycosis, this study was performed to evaluate Susceptibility of clinical isolates of *Aspergillus* caused onychomycosis to itraconazole, voriconazole and amphotericin B.

Materials and Methods:
The present study was performed on 50 Aspergillus strains isolated from patients with onychomycosis. Determination of Aspergillus species was performed using molecular sequencing method. The drug susceptibility of Aspergillus species to amphotericin B, itraconazole and vriconazole was evaluated by broth microdilution method according to CLSI M38-A2 protocol.

Results:
From 50 patients, 13 patients were males and 37 were females. Fifteen patients had fungal infection of finger nails and 33 patients had fungal infection on toe nails; 2 patients had both infections of finger and toe nails. The most frequent species was Aspergillus flavus (34 cases). 14.7% of A. flavus isolates with MIC> 2µg / ml to amphotericin B were considered as resistant isolates. The sensitivity to itraconazole and voriconazole was 100%. MIC90 of amphotericin B, itraconazole, and voriconazole were obtained for Aspergillus flavus species 4 µg / ml, 0.25 µg / ml and 1 µg / ml respectively.

Conclusion:
All *Aspergillus* species are susceptible to itraconazole and voriconazole and these two drugs are more effective than amphotericin B on Aspergillus species.

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Drug Resistance Pattern of *Mycobacterium Tuberculosis* in North of Iran

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ARTICLEINFO

Oral

Key words:
Mycobacterium tuberculosis, Multidrug-resistant tuberculosis.

ABSTRACT

Introduction:
Mycobacterium tuberculosis (MTB) is causative agent of tuberculosis (TB), which still remains one of the most common infectious diseases in developing countries. This study aimed to determine the rate of drug resistance to first-line anti-TB drugs in Mazandaran province.

Materials and Methods:
MTB isolates were collected from March 2016 to July 2018. Drug susceptibility testing to rifampicin, isoniazid, ethambutol, and streptomycin was performed on Löwenstein-Jensen medium using proportion method.

Results:
A total of 196 MTB isolates were included to this study. A set of 10 isolates (5.1%, 95% CI=2.8%-9.1%) were resistant to at least one drug. Four isolates (2%, 95% CI= 0.8%-5.1%) were resistant to streptomycin, 2 isolates (1%, 95% CI=0.3%-3.6%) were resistant to isoniazid, 2 isolates (1%, 95% CI=0.3%-3.6%) were resistant to rifampicin, one isolate (0.5%, 95% CI= 0.1%-2.8%) was resistant to ethambutol and one isolate (0.5%, 95% CI= 0.1%-2.8%) showed resistance to rifampicin and isoniazid then identified as multidrug-resistant (MDR).

Conclusion:
The prevalence of drug resistant isolates in this study area point to the necessity for further enforcement of TB treatment and disease control management. Drug susceptibility testing for all TB cases is recommended to prevention and control of drug-resistant TB.

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Association Between Vitamin D and Urinary Tract Infection in Children in the Southeast of Iran

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ARTICLEINFO

Oral

Key words:
Childern, Urinary tract infection, Vitamin D.

ABSTRACT

Introduction:
Urinary tract infection is one of the most common infectious diseases in children.Vitamin D plays a very important role in regulating the immune system and is also effective on the systemic effect of pathogens.

Materials and Methods:
This cross-sectional study was performed on 63 children with pyelonephritis hospitalized in Afzalipour Hospital and 68 healthy children referred to Samen Al-Haj Clinic in Kerman. The study groups were evaluated by taking a complete history, completing a questionnaire and clinical examination and laboratory tests. Vitamin D levels were measured and compared in the two groups.

Results:
The mean age of patients was 34 months and healthy individuals were 38 months. The mean serum levels of vitamin D in patients and healthy group were 34.66 and 42.9, respectively. In comparison, the difference in vitamin D levels between normal and UTI groups was significant (P= 0.016). Comparing the three groups of vitamin D levels, there was no significant difference between girls and boys in terms of vitamin D deficiency.

Conclusion:
Inadequate vitamin D levels are associated with the prevalence of UTIs, and vitamin D supplementation can be a low-risk option for preventing UTIs.

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Recombinant LytU-SH3b as a new Efficient Enzybiotic

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ARTICLEINFO

Oral

Key words:
Enzybiotics, LytU, Staphylococcus aureus, *SH3b.*

ABSTRACT

Introduction:
Methicillin-resistant *Staphylococcus aureus* (MRSA) is a challenging infectious agent worldwide. Autolysins are Staphylococcal enzymes that lyse bacterial cell wall for cell division. Autolysins can be used as novel enzybiotics (enzymes have antibiotic effects) for staphylococcal infections. LytU is a newly explored autolysin. SH3b is a potent cell wall binding domain that can be fused to lytic enzymes to increase their activity. The aim of this study was to design a novel and efficient fusion enzybiotic that could lyse staphylococcal cell wall peptidoglycan by disrupting the bacteria.

Materials and Methods:
LytU-SH3b fusion construct was synthesized and LytU was amplified through the construct, using overhang PCR. The fusion and native forms that had his-tag were synthesized by recombinant technology in Escherichia coli BL21 (DE3) strain and purified utilizing Ni-NTA agarose beads. LytU and LytU-SH3b activity and potency were assessed using plate lysis assay, turbidity reduction assay and minimal inhibitory concentration (MIC) tests.

Results:
All these tests showed that LytU-SH3b has more activity and potency than LytU. LytU-SH3b has MIC 421 fold lesser than LytU.

Conclusion:
Finally, LytU-SH3b is a novel and efficient recombinant enzybiotic that can lyse MRSA as an alternative to chemical small molecule antibiotics.

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Severe Cutaneous Anthrax

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ARTICLEINFO

Oral

Key words:
Anthrax, Cutaneous, Chest

ABSTRACT

Introduction:
Anthrax is rare and fatal disease caused by a spore-forming bacillus. Its signs and symptoms depend on the involved organ, ranging from a simple skin rash to shock, even to death. Cutaneous anthrax is the most common form of this infection. Its initial manifestation is an itchy, painless papule that eventually turns into a lesion with a black center. Cutaneous and gastrointestinal form are the most common form in Iran, and men affected more than women in Iran.

Materials and Methods:
A 38-year-old man presented to our emergency room complaining of a painless papule in the left lower jaw. On physical examination; a 2 by 2 cm necrotic eschar with severe surrounding edema to the middle of the anterior chest was seen.

Results:
Bedside sonography of the neck revealed the cobblestone view . According to the patient's history of keeping goats at home, the patient was treated with intravenous ciprofloxacin and penicillin for anthrax and was admitted to the infectious ward.

Conclusion:
A typical skin lesion may be presented with delay and the patient presents only with local symptoms of cellulitis preliminary. The recommended antibiotic regimen was penicillin and aminoglycosides, e.g. gentamicin, though there are reports of anthrax being resistant to these antibiotics.

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Phaeohyphomycosis Caused By Black (Melanized) Fungi, A Neglected Diseases in Iran

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ARTICLEINFO

Oral

Key words:
Black fungi, Iran, Fungus, Phaeohyphomycosis.

ABSTRACT

Introduction:
Phaeohyphomycosis is a rare opportunistic fungal infection that can be caused by black or melanized fungi. The infections with black fungi have rarely been reported in the Middle East especially in Iran.

Materials and Methods:
In this retrospective study, phaeohyphomycosis cases were evaluated during the 2001-2020. The studied clinical specimens were related to cutaneous, sub-cutaneous and deep fungal infections. Most of the causative agents of phaeohyphomycosis were identified by molecular methods, particularly PCR sequencing.

Results:
Eleven cases of phaeohyphomycosis were reported that caused by Nattrassia mangiferae, Exophiala dermatitidis, Chaetomium spp., Neoscytalidium dimidiatum, Alternaria malorum, Rhinocladiella mackenziei, Cladosporium bantianum and Cyphellophora ludoviensis. Among the black fungi, R. mackenziei caused brain abscess more than other fungi. Six (54%) patients didn't have any underlying disease. Amphotericin B was used in most patients, however four (36%) of the patients died.

Conclusion:
Published studies in Iran indicate no specific risk factors for phaeohyphomycosis, and there is not any report about the incidence of this disease in immunocompetent individuals. Furthermore, selective treatment for these rare infections has not even been defined in clinical studies, and the mortality rate was high. However, the clinical manifestations related to black fungi should be considered in Iran.

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Successful Ceftazidime-Avibactam Treatment of PDR-KPC-Positive Klebsiella Pneumoniae Infection in A Patient with Liver Transplant

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ARTICLEINFO

Oral

Key words:
Carbapenemase, Ceftazidime/avibactam, *Klebsiella pneumoniae*, Orthotopic liver transplant.

ABSTRACT

Introduction:
SOT recipients are vulnerable to infection by multidrug resistant bacteria due to their underlying end-stage organ failure combined with a major surgical procedure and the necessity of life long immunosuppression.

Materials and Methods:
Here we report a case of Klebsiella pneumoniae carbapenemase (KPC)-producing Klebsiella infections in orthotopic liver transplant recipients, investigation revealed skin and lung involvement by aspergillosus and demonstrated Pan drug resistance (PDR) Klebsiella in culture of bronchoalveolar lavage .that successfully were treated wih voriconazol and ceftazidime/avibactam. ceftazidime/avibactam is active against many CRE isolates, including KPC- and OXA-48-producers, but it does not have activity against the MBLs.

Results:
At the end of 2 weeks therapy with ceftazidime-avibactam we have imaging and clinical response. and he was discharged home with continued oral antifungal treatment. The patient did not show any relapses for up to 18 weeks.

Conclusion:
Ceftazidime/avibactam is active against many CRE isolates, including KPC- and OXA-48-producers, but it does not have activity against the MBLs. Carbapenem-resistant Enterobacteriaceae are perfectly suited to become important pathogens in SOT recipients .

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Lophomonas: Pathogenic Organism?

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ARTICLEINFO

Oral

Key words:
Bronchalveolar disease , Mashhad ,Iran, Lophomonas blattarum.

ABSTRACT

Introduction:
Lophomonas blattarum(L.b) is a flagellated protozoa which inhabits the intestines of cockroaches and mites. Several studies report L.b from bronchoalveolar disease patients all over the world. It causes infections in human respiratory system. It appears as a round-ovoid multiflagellated protozoa which can be common to misdiagnose with epithelial cell. Although L. blattarum is a rare parasite, it is considered as a potential pathogen for bronchial and respiratory tract infections and various respiratory symptoms.

Materials and Methods:
Since 0ct 2015 in several study in Mashhad(Iran) we found 150 patients with pulmonary chronic disease who has not responded to conventional treatment .

Results:
After bronchoalveolar lavage presence of *L. blattarum* confirmed for them. Metronidazole is a drug of choice of this infection.

Conclusion:
Since delayed diagnosis of pulmonary and sinus infection due to *L.blattarum* contributes mortality and morbidity, we suggest special attention to *L.blattarum* infection as an emerging pathogen in Iran.

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Risk Factors of Mental Health Outcomes in Healthcare Workers Exposed to COVID19, Mashhad, Iran

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ARTICLEINFO

Oral

Key words:
Anxiety, COVID-19, Depression, Insomnia, Mental health.

ABSTRACT

Introduction:
Healthcare workers are on the front-line with nCOV19 and at risk of developing different mental burden. Here, we evaluated the risk factors associated with mental-health outcomes in healthcare workers in Mashhad, Iran.

Materials and Methods:
This was a cross sectional study that was performed between 25 April 2020 and 31 May 2020 in five referral centers of Mashhad, Iran. We used Patient Health Questionnaire (PHQ-9), the 7-item Generalized Anxiety Disorder scale (GAD-7), Insomnia Severity Index (ISI), and Impact of Event Scale–Revised (IESR), VAS of fear for depression, anxiety, insomnia, distress and fear related to nCOV19. Risk factors were analyzed by regression analysis.

Results:
The mean age of participants was 33.84± 7.03 years old. Most of them were female (64.2%). Of 360 participants, 252 of them had any extent of anxiety disorder (70%), 63.8% of them had extent of depression, 55.8% of them had extent of insomnia and 72.8% of them had distress. Age , exposure to patient, work experience, having children and having COVID19 in subjects were the significant independent predictors of depression in participants.

Conclusion:
COV19 can significantly influences healthcare worker mental health status. By targeting these predictors, health policy makers can reduce the psychologic burden of healthcare workers.

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Comparison of Neutrophil Apoptosis by *Pseudomonas Aeruginosa* Exotoxins Between Immunocompromised Children and Neonate

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ARTICLEINFO

Oral

Key words:
Apoptosis, Exotoxin, Neutrophil, Pseudomonas.

ABSTRACT

Introduction:
Pseudomonas aeroginosa is the leading agent in nosocomial infections . Multidrug resistance is and the main problem of P.A infections Thus, paying more attention to the pathogenesis mechanisms of *Pseudomona* is crucial for its prevention control.

Materials and Methods:
In this survey 41 blood samples of children with cancer and term neonates were taken. After the isolation of neutrophils with standard methods and culture Pseudomonas in culture media with (Macfarland tube concentration) we interact neutrophils and exotoxins for 15,30,45, and 60 minutes ;then we performed NBT test and evaluated the range of Pseudomonas exotoxins action on neutrophil apoptosis.

Results:
The distribution of sex among children with cancer and term neonates group was (12 M Vs 9 F, 12 M Vs 8 F respectively). Apoptosis was occurred in 81.8% of blood specimens of children with cancer and 90.8% of term neonates. We observed 4.7% growth in cancer and 1% in neonate group. The mean apoptosis was time dependent among cases with the 92.5% in patients with cancer and 94.7% in term neonates all at the end of first 15 minute.

Conclusion:
Current study discloses the role of *Pseudomonas* exotoxins on acceleration of neutrophil apoptosis in a time dependent manner. As is established this effect is more significant in children with cancer and neonate cases.

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Comparison of Laboratory Parameters Including Ratio of Neutrophil to Lymphocyte in Children Aged 6-60 Month with Febrile Seizure

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ARTICLEINFO

Oral

Key words:
Children, Febrile seizure, Neutrophil.

ABSTRACT

Introduction:
Febrile seizure is one of the most common diseases in children aged 6-60 month. Diagnosis of type of seizure is according to parents says. Therefore search for a laboratory and precise approach for diagnosis of type of seizure is necessary.

Materials and Methods:
In present study children with febrile seizure were studied between 2016 and 2017. Blood parameters including WBC level, ratio of neutrophils to lymphocytes, HCT, PLT, hemoglobin and Na, k, Ca, BS and Mg were compared between patients according to type of seizure.

Results:
Among 49 patients, 35 patients were diagnosed as simple seizure and 16 patients were diagnosed as complex. Type of seizure had no significant relationship with sex, WBC level, hemoglobin, Na, k and body temperature ($p>0.05$). Also there was no significant difference between groups in age, HCT, platelets, calcium, magnesium, blood sugar and CRP. There was no significant difference between groups in ratio of neutrophil to lymphocyte. This was 1.4±2.42 and 2.18±3.05 in simple and complex group respectively.

Conclusion:
laboratory parameters and ratio of neutrophil to lymphocyte showed no significant difference between febrile children with simple and complex seizure respectively.

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The Incidence of Chatheter Associated Urinary Tract Infection in Admitted Patient in Tabriz Children Hospital

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ARTICLEINFO

Oral

Key words:
Nosocomial infection, Urinary tract infection, Urinary catheter.

ABSTRACT

Introduction:
Urinary tract infections is the most common bacterial infection which is responsible for almost 40% of nosocomial infections. Therefore, the present study was conducted to determine the incidence and share of catheter-related urinary tract infections in Children hospital of Tabriz.

Materials and Methods:
The present study was a cross-sectional study and was performed on all patients admitted to the children hospital of tabriz who have been diagnosed with urinary tract infection at the time of admission.

Results:
The rate of use of urinary catheter in general was 4.15%. A total of 36 patients (63.9% males and 36.1% females) had been diagnosed with urinary tract infection at the time of admission.The most common organisms involved in Urinary Tract Infections were *Candida* (46.7%), *Enterococci* (22.2%), *E.coli* (19.4%). 25 cases (69.4%) had catheter-related urinary tract infections.The rate of incidence of urinary tract infection in patients with urinary catheter was 7.72 per 1000 catheter per day, which was higher in infectious ward (30.3), internal B ward (16) and internal A ward(15.5).

Conclusion:
The rate of use of urinary catheter in hospitalized patients, as well as the index of catheter-related UTI per day, was generally lower than other studies. Most cases of nosocomial UTI were caused by urinary catheters.

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Mucormycosis in Pediatric Hematologic Disorders

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ARTICLEINFO

Oral

Key words:
Antifungals, Hematologic disorder, Mucormycosis, Pediatric, Rhizopus oryzae.

ABSTRACT

Introduction:
Mucormycosis affects immunocompromised pediatrics associated with significant mortality. The present study aimed to investigate the mucormycosis in pediatric patients with hematological disorders due to the proper management of these patients.

Materials and Methods:
170 pediatric patients (range 1 month to 14 years) with hematological disorders were evaluated for mucormycosis. Clinical samples were examined by direct microscopic examination and culture. Blood specimens were cultured by the BACTEC medium. Real-time PCR was performed on patients' clinical samples. The mucorals were identified by DNA sequencing.

Results:
The female/male ratio was 73/97. Acute lymphoblastic leukemia and acute myeloid leukemia were the most common hematological disorders in the patients. The epidemiology of mucormycosis in patients was 20/170 (11.8%). Ten patients (50% of infected cases) died. The etiologic agents were *Rhizopus oryzae*, *Rhizopus microsporus*, *Rhizopus stolonifer*, and *Basidiobolus ranarum*. One hundred thirty-eight (81.2%) of patients were using antifungal agents before diagnosis due to prophylaxis or treatment of previous fungal infections.

Conclusion:
The mortality rate of mucormycosis in our study was high. There was a significant relation between antifungal therapy and the incidence of mucormycosis. Early and accurate detection of this infection by molecular methods and sequencing could result in a better outcome.

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Misdiagnosis of COVID19 as Acute Abdomen in Children; Case Report of Atypical Presentation

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ARTICLEINFO

Oral

Key words:
COVID-19, Gastrointestinal presentation, Pediatrics.

ABSTRACT

Introduction:
Children have been observed to have milder clinical manifestations of the virus than do adults. Gastrointestinal symptoms have not been recognized in the early stages of the pandemic, and are infrequently reported in the literature on infection in adults. It has been reported that a high mean viral load in the nasopharynx is associated with the occurrence of diarrhea in patients with severe acute respiratory syndrome. We reported two cases of acute surgical abdomen with atypical presentation of COVID- 19in children with gastrointestinal symptoms. Both of them were presented by bilious and progressive vomiting and abdominal pain with no response to outpatient treatment and admitted for probable surgical procedure.

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Evaluation of the Compliance of Isolated Rooms in Mashhad Hospitals with Standard to confronting the New Viruses like Corona

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ARTICLEINFO

Oral

Key words:
Corona viruses, Isolated room, Standards.

ABSTRACT

Introduction:
The emergence of COVID- 19 pandemic, remind us that airborne infectious can pose a serious threat to human health. As regards in hospital that there is direct exposure to people with infectious diseases; There is a high risk of spreading these types of diseases. Considering the importance of isolation in controlling airborne pathogens such as coronaviruses, the aim of this study was to determine the compliance of isolated rooms with standards to prevent the spread of infectious agents.

Materials and Methods:
A checklist was designed to check the compliance of 22 isolated rooms with the standards. The parameters of pressure difference, ventilation rate, air flow at inlet and outlet concentration of carbon dioxide, temperature and humidity were also measured.

Results:
The results showed that only 27% of the isolated rooms had a negative pressure more than 2.5 Pascal as standard, 76% of had less than 12 air changes per hour (ACH). The average temperature and humidity were 30.2, 77.4, respectively and 61% did not have a HEPA filter.

Conclusion:
Designing isolation rooms according to the standards and the use of mechanical ventilation system equipped with HEPA filter and adjust ACH can play an important role in reducing the transmission of airborne infections such as corona.

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Kawasaki Disease Proceeds By Corona Virus Infection In an Iranian Child

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ARTICLEINFO

Oral

Key words:
COVID- 19, Corona virus, Kawasaki.

ABSTRACT

Introduction:
During of COVID- 19pandemic, we see broad spectrum disease burden affecting the childhood age presenting as multisystem inflammatory process. One of the most important spectrums of this process is Kawasaki disease.

Materials and Methods:
A 4.5 y/o male patient presented with high grade fever for more than 5 days and then developed with maculopapular rash in trunk and extremities for 2 days , bilateral bulbar non-purulent conjunctivitis , strawberry tongue and also lip fissure. In 12th day scaling on tip of fingers was detected

***Results*:**
CBC revealed leukocytosis with neutrophil dominancy and platelet count was 220* 103/mm with Hb=9 g/dl , also CRP was elevated with high ESR (80 100 mm/hr). LFT was in normal range limit . also Echocardiography was normal. in 12 th day platelet count raised to 684* 103 /mm .in spite of previous exposure to his father who had COVID- 19 disease that was confirmed by RT-PCR sample one month ago ,RT-PCR sample was negative and spiral chest CT had no any pathologic findings . So serology test was done for him that revealed IgG level more than 5 times and IgM level was slightly elevated

Conclusion:
This case presentation says to us that Kawasaki syndrome originated after COVID- 19infection

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Evaluation of Clinical Manifestation, Radiological Findings, Laboratory Data and Outcome of Chronic Kidney Disease Patients Infected With COVID- 19at Tehran, Iran

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ARTICLEINFO

Oral

Key words:
COVID-19, Chronic kidney disease, SARS-CoV-2, Dialysis. Kidney transplant, Outcome

ABSTRACT

Introduction:
Chronic kidney disease (CKD) patients are a large population and of critical importance. Not only, they have an underlying disease that can exacerbate their general condition, but also some other risk factors, for instance, old age, impaired immune function, and other comorbidities contribute to increasing their susceptibility to the COVID- 19infection.

Materials and Methods:
As data on CKD patients with COVID- 19Infection is limited, we decided to carry out a cross-sectional study on 78 CKD patients with approved SARS-COV2 infection at Labbafinezhad Hospital either on dialysis or not, and also CKD patients with kidney transplant history.

Results:
Among all symptoms, dyspnea (19.2%) was the most common one. Among all patients, including 53 women and 25 men, 53 (74.6%) had hypoxia, 47 (81%) had tachypnea and 9 (23.1%) had some reduction in the level of consciousness. Laboratory data analysis shows an increase in LDH, Creatinine, ESR, and CRP levels. The most prevalent finding on chest CT-Scan was bilateral ground-glass opacity detected in 31 (86.1%) patients.

Conclusion:
Because underlying medical conditions can adversely affect the outcome of COVID- 19patients, evaluation of clinical manifestations, radiologic findings, laboratory data, and outcome of COVID- 19patients with CKD is required to establish a perspective for physicians to manage these patients.

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Experiences of Patients with Coronavirus From Quarantine: A Qualitative Study

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ARTICLEINFO

Oral

Key words:
Corona-virus, Experiences, Quarantine, Qualitative study.

ABSTRACT

Introduction:
Since there are no vaccines or treatments for COVID- 19yet, One of the recommendations of the WHO to control this disease is quarantine . therefore, the present study aimed to explain the concept of corona disease and quarantine from the perspective of patients with this disease.

Materials and Methods:
This study was conducted with a qualitative research approach of hermeneutic phenomenology by Van Manen's analysis method. Participants were selected using the purposive sampling method among patients with Qovid-19 in Booali Sina Hospital in Qazvin city, Iran, using individual interviews and semi-structured and with 11 patients.

Results;
Findings from the analysis of the interviews included two main themes: "deprivation" and "confusion". The subject of deprivation includes the four categories of “the loss of the normal routine of life”, “loneliness”, “disruption of religious beliefs and practices”, and “restriction”. And the themes of confusion included the categories of “preferring the recovery center”, “ignoring the principles of social distancing and segregation”, and “uncertainty”.

Conclusion:
Quarantine deprived them of normal routine activities and brought them social and emotional restrictions, confusion, and uncertainty. on the other hand, they reported that their fears were mostly due to fear of regaining their health or fear of infecting their compatriots.

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Etiology and Mortality Rate of Newborn In NICU of Imam Reza Hospital in Recent 5 Years

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RTICLEINFO

Oral

Key words:
Etiology, Newborns, Neonatal mortality rate, Neonatal intensive care unit.

ABSTRACT

Introduction:
Neonatal period (first 28 days after birth) is the phase of live in which multiple Physiological change occur to adopt child for living outside the uterus. This period is the most risky time for child survival.
Progressing programs are suggested to reduce the NMR. Therefore, the aim of study was to investigate the NMR in NICU of Imam Reza Hospital for 5 years (between 2015 and 2020)

Materials and Methods:
The present study was retrospective and descriptive cross-sectional at Imam Reza hospital during the years 2015-2019. The extracted information was categorized and entered into the SPSS software for data analysis.

Results:
In this study 501 newborns of 4348 NICU admissions were died (11.52%). The mean birth weight was 1658 ± 1018.98grams, the mean gestational age was 32± 6 weeks. Most newborns were less than 1000 gr birth weight. The most common cause of NMR was respiratory distress, congenital heart disease and congenital anomalies respectively.

Conclusion:
In general, due to the high prevalence of premature infant mortality at the age of less than 32 weeks, the development of care and training programs should be prioritized to prevent preterm delivery as well as the prevention of respiratory distress syndrome, asphyxia and low birth weight.

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Surveillance of Antimicrobial Resistance in Nemazee Hospital, Shiraz, Iran Using WHONET Program

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ARTICLEINFO

Oral

Key words:
Antimicrobial, Blood stream infections, Surveillance.

ABSTRACT

Introduction:
We investigated trends in the distribution of pathogens causing Blood stream infections and their antimicrobial susceptibility patterns, detect the emergence, spread of particular resistance traits in them in Nemazee Teaching Hospital using WHONET 5.6 program.

Materials and Methods:
This study was carried out at the Professor Alborzi Clinical Microbiology Research Center, during 2014 and 2020 and their antimicrobial susceptibility testing was performed by Kirby Bauer's disc diffusion method.

Results:
Overall, among 6667 pathogens isolated from blood culture, Gram-negative bacteria were the predominant isolates (5126, 76.9%). The most frequently isolated Gram-negative bacteria were Stenterophomonase maltophilia (1638, 31.9%), followed by Escherichia coli (n=551, 10.7%), Pseudomonase spp. (534, 10.4%). After that Gram positive bacteria were common isolates (1506, 22.6 %). The greatest frequency in Gram positive bacteria were Enterococcus spp. (569, 37.8%), Staphylococcus aureus (517, 34.3%).The percentages of MRSA were (117/517, 22.6%), imipenem resistance among P. aeruginosa were (55/203, 27.1%), VRE were (334/569, 58.7%) and ESBLs-producing Gram negative pathogens were (1173/5126, 22.9%). The most active agents against gram positive bacteria were Linezolid (99%), Vancomycin (72.5%) and against Gram negative pathogens were polymixin B (92%), Colistin (80.2%).

Conclusion:
A high prevalence rate of MRSA, VRE, ESBL pathogens is a warning about a serious health problem.

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Functional and Structural Characterization of SARS-Cov-2 Spike Protein: An in Silico Study

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ARTICLEINFO

Oral

Key words:
Bioinformatics, Mutation, SARS-CoV-2, Spike, Postmodification.

ABSTRACT

Introduction:
Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) is the cause of the global outbreak of coronavirus disease 2019 (Covid-19), which has been considered as a pandemic by the WHO. SARS-CoV-2 encodes four major structural proteins, among which spike protein has always been a main target for new vaccine studies. This in silico study aimed to investigate some physicochemical, functional, immunological, and structural features of spike protein using several bioinformatics tools.

Materials and Methods:
We retrieved all SARS-CoV-2 spike protein sequences from different countries registered in NCBI GenBank. CLC Sequence Viewer was employed to translate and align the sequences, and several programs were utilized to predict B-cell epitopes. Modification sites such as phosphorylation, glycosylation, and disulfide bonds were defined. Secondary and tertiary structures of all sequences were further computed.

Results:
Some mutations were determined, where only one (D614G) had a high prevalence. The mutations did not impact the B-cell and physicochemical properties of the spike protein. Seven disulfide bonds were specified and also predicted in several N-link glycosylation and phosphorylation sites. The results also indicated that spike protein is a non-allergen.

Conclusion:
Our findings provided a deep understanding of spike protein, which can be valuable for future studies on SARS-CoV-2 infections and design of new vaccines.

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Evaluation of the Prevalence of Methicillin-Resistant Staphylococcus Aureus (MRSA) in Hospital Food

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ARTICLEINFO

Oral

Key words:
Antimicrobial resistance, Hospital food, MRSA, S. Aureus.

ABSTRACT

Introduction:
In health care settings, ensuring microbiological quality and safety of hospital food is essential for a patient with somehow compromised immune systems. Most cases of food-borne outbreaks in hospitals are occurred due to the consumption of food contaminated with *S. aureus*. The present research was carried out to determine the presence of MRSA in raw and cooked hospital food samples from the university hospitals of the Mashhad city, Iran.

Materials and Methods:
From August 2019 to January 2020, 390 hospital food samples were obtained from 13 different hospitals. In order to isolate the *S. aureus*, primary culture of food samples was performed on Baird-Parker agar. The strains were characterized as *S. aureus* by standard biochemical tests including catalase, coagulase and DNase. MRSA strains were identified using mecA-based PCR amplification.

Results:
The results revealed that 93 (23.84%) samples were contaminated with *S. aureus*. Of the 390 investigated food samples, 5.12% were positive for MRSA. Chicken and meat barbecues had the highest prevalence of MRSA. While mixed rice samples had the lowest prevalence of MRSA.

Conclusion:
The presence of the MRSA among the cooked foods tested strongly emphasizes the need for a safer management of catering in the hospital.

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Professional Code of Ethics in Microbiology

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ARTICLEINFO

Oral

Key words:
Ethics,Microbiology, Professionalism.

ABSTRACT

Introduction:
Microbiology related societies and associations request their members to abide by high standards of professional code of ethics, conduct and practice. Accordingly, this study tries to introduce the main ethical and professional codes in the field.

Materials and Methods:
This descriptive study was done through a review of the literature regarding professional and ethical codes in microbiology and other similar fields of study. The collected data categorized thematically in general and specific statements including preamble and the four main parts.

Results:
Four principles of biomedical ethics could function in the field of microbiology as the basis for ethical decisions and professional considerations. Thematically, collected codes categorized into four main fields of education (e.g. ethical relationship with trainees, teaching etiquettes, etc.), research (e.g. scientific misconduct, animal ethics, etc.), clinical (e.g. responsibility towards patients, etc) and laboratory (e.g. safe discarding dangerous bio-specimens, accountability towards test results, etc.) activities. Moreover, considerations of bio-safety, bio and informational security, staff related trainings and social responsibility of microbiologists are also set forth in the collection

Conclusion:
Other than the codes having supportive educational, regulative and supervising programs are also necessary. Iranian societies and associations of microbiology could encourage and support thoughts and activities in the way to reach high native standards

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Comparative Study of Single Dose Fluconazole and 5 days Flouconazol And Nistatin Oral Suspension for Treatment of Oral Condidias in Infant Under 1 year

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ARTICLEINFO

Oral

Key words:
Fluconazole, Oral thrush, Nystatin.

ABSTRACT

Introduction:
Candidiasis is a fungal infection caused by Candida species, especially Candida albicans. Neonatal candidiasis is associated with significant morbidity and mortality.

Materials and Methods:
This clinical trial study was performed on three groups of patients. The aim of this study was to compare the effect of oral nystatin with single dose fluconazole and 5-day fluconazole on oral thrush in children under one year old

Results:
This study was a clinical trial study performed on three groups of patients. In this study 90 children under 1 year were studied. The highest frequency is in the age group of 1 to 3 months. 74 (82.2%) patients recovered. 87 (96.7%) patients had uncomplicated, 2 (2.2%) nausea and 1 (1.1%) diarrhea. 49 (54.4%) patients were female and 41 (45.6%) were male. 5-day fluconazole had the highest rate of recovery (96.7%) in oral thrush treatment and the lowest was nystatin, although there was no significant difference between single-dose fluconazole and 5-day fluconazole (4.3%).

Conclusion:
The results of this study showed that single-dose fluconazole and 5-day fluconazole suspension had a higher percentage of recovery than nystatin. There was no significant difference between the rates of recovery by sex and age.

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Detection of ERG11 Point Mutations in Iranian Fluconazole-Resistant Candida Albicans Isolates

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ARTICLEINFO

Oral

Key words:
Candida albicans, ERG11 gene, Fluconazole, Minimum inhibitory concentration

ABSTRACT

Introduction:
Candidiasis is referred to a group of superficial and deep-tissue infections. The main treatment is azoles, such as fluconazole. The increased use of antifungal agents causes azole-resistant isolates. Mutations in ERG11 reduce the affinity between the protein and azole. This study aimed to determine the susceptibility profile of *C. albicans* isolates and also the detection of ERG11 mutations.

Materials and Methods:
A total of 216 clinical isolates obtained from Mashhad, Isfahan, and Tehran cities in Iran, during 2016-2018. The clinical isolates were identified using molecular techniques. MICs was determined according to the CLSI M27-A3 and M27-S4 documents. In the resistant strains, ERG11 genes were amplified and cycle sequencing reactions were performed on PCR products.

Results:
The MIC values for fluconazole had a range of 0.125-16 µg/ml. Totally, 41 nucleotide changes were detected among 4 resistant isolates. In this regard, 4 out of 41 mutations in codons caused changes in ERG11p (E266D, n=2, and V488I, n=2); however, these mutations did not lead to fluconazole resistance.

Conclusion:
Fluconazole resistance among clinical isolates is not merely due to the changes in ERG11p, and may be also related to the prevention of the intracellular accumulation of the antifungal agent and alteration of the target enzyme.

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Prevalence of SARS-Cov-2 Antibody in the Public Hospitals' Staff: An Analytic Serosurvey From Shiraz, Iran

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ARTICLEINFO

Oral

Key words:
COVID-19, Hospital, Health care worker IgG.

ABSTRACT

Introduction:
Outbreak of COVID- 19in China in the late 2019 is an unprecedented catastrophe that also involved many other countries, including Iran. With regard to danger of the disease contagion, it is necessary to detect asymptomatic or mild cases, especially in hospitals' staff who are highly exposed to the disease.We aim to estimate IgG-seroprevalence among hospitals' staff in two public hospitals in order to determine local transmission and the infection's risk factors and also protective immunity among this high risk population.

Materials and Methods:
Screening was offered to hospitals' staff of two public hospitals in Shiraz, Iran. Screening contained measurement of IgG antibodies against SARS-CoV-2. In addition, related checklist consisting of questions about socio-demographic, occupational and epidemiological characteristics were completed by participants.

Results:
Out of 494 participants in this study, total of 29 (5.8%) had anti-SARS-CoV-2 IgG in their bloods. Non-Proper disposal of used protective equipment or infectious waste (OR=26.5), Rotational daily shift work (OR=7.5), being anxious about getting COVID- 19(OR=3.8), age (OR=1.06) were the significant determinants of having anti-SARS-CoV-2 IgG in the hospitals' staff, respectively.

Conclusion:
It is essential to continue training and giving technical consultation about this disease especially about proper disposal of used protective equipment or infectious waste in rotational daily shift workers.

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Distribution and Antimicrobial Susceptibility Pattern of Bacterial Pathogens Causing Urinary Tract Infection in Akbar Pediatric Hospital, Mashhad

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ARTICLEINFO

Oral

Key words:
Antimicrobial susceptibility pattern, Urinary tract infection, Mashhad.

ABSTRACT

Introduction:
Urinary tract infection (UTI) is the commonest bacterial infectious disease in community practice with a high rate of morbidity and financial cost. Since most UTIs are treated empirically, the criteria for the selection of antimicrobial agents should be determined on the basis of the most likely pathogen and its expected resistance pattern in a geographic area. Therefore, there is a need for periodic monitoring of etiologic agents of UTI and their resistance pattern in the community. The aim of the study is to determine the prevalence of UTI in patients admitted to Akbar Hospital in Mashhad.

Materials and Methods:
From September 2019 to September 2020, 6280 urine samples were evaluated. Antimicrobial susceptibility was performed on all isolated bacteria by Kirby Bauer's disc diffusion method. Interpretation was based on CLSI criteria.

Results:
The uropathogens identified from patient specimens were Escherichia coli 53% (345/650), candida 15% (98/650), Klebsiella pneumoniae 10.8% (70/650), Enterococcus spp. 5.4% (35/650) and Pseudomonas aeruginosa 3.4% (22/650). Resistance rates were highest for Ampicillin (79%) Sulfamethoxazole (72.3%), Cefixime (53.6%). Resistance was lowest for Meropenem (10.4%), Amikacin (9.6%) and Piperacillin/ Tazobactam (8.4%).

Conclusion:
Given the relatively high resistance rates for Ampicillin and Sulfamethoxazole, these antimicrobials should be reconsidered for empirical treatment of UTIs in this patient population.

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Could COVID- 19 Induce Pulmonary Abscess? Case Report: Neonate With Pulmonary Abscess and COVID-19

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ARTICLEINFO

Oral

Key words:
COVID-19, Neonate, Pulmonary abscess.

ABSTRACT

Introduction:
COVID- 19is an infectious disease which is diagnosed commonly with pneumonia accompanying fever, cough and respiratory distress. However new presentation discovered every day.

Materials and Methods:
A two-month-old girl presented in emergency room because of cyanosis and cardiac arrest. She had been resuscitated and intubated. In her past medical history, she was born from twins' pregnancy by cesarian in Turkey. She and her family did not have any respiratory symptoms.

Results:
In chest X-ray there was lobar pneumonia in upper right lobe. She had received Vancomycin and meropenem to treat pneumonia. After one week she referred to Akbar hospital for complementary treatment. Initial X-ray demonstrated a mass-like in upper right lobe with low density in center. Thorax sonography reported heterogenous mass (56 *32 mm) in right upper lobe. she had lymph dominant leukocytosis, high CRP level and negative blood culture result and positive nasopharynx PCR report for COVID-19. In surgical operation, there was a large cyst in the right upper lobe containing white puss. Lobectomy was done. Her symptoms were revealed, and the infant was discharged after 6 days.

Conclusion:
COVID- 19is presented with various symptoms but there is not any report of abscess formation in literature yet. Although it may be an accidental finding.

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Clinical and Laboratory Findings of Children with Coronavirus Disease 2019 (COVID-19) in Mashhad, Iran: An Observational Study

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ARTICLEINFO

Oral

Key words:
Clinical manifestation, Novel coronavirus, Pediatric, SARS-CoV2.

ABSTRACT

Introduction:
The novel coronavirus disease 2019 (COVID-19) is a cause of respiratory/systemic disorder which is spread in the world since September 2019 and is now a serious pandemic. To date, there is limited data on children available in the literature especially in Middle East. In this article, we aimed to provide an overview of clinical and laboratory data in children with COVID- 19admitted in Mashhad, Iran.

Materials and Methods:
This was a cross sectional study that was related to the Registry of COVID19 Pediatric patients in Mashhad(RCPM), from 20 February 2020 to 5 August 2020 in Akbar and Dr. Sheikh Hospitals, the tertiary referral centers of pediatric COVID19 patients in Northern East of Iran.

Results:
In this period, from 1245 patients referred to our center, 97 patients were positive for COVID19 with PCR or serologic test. Majority of them were male(58, 59.8%). Twenty patients lead to pneumonia(20.6%), eight of them lead to multi-inflammatory syndrome of children (MIS-C)(8.2%), Kawasaki disease was seen in 4 patients(4.1%), myocarditis in 4 patients(4.1%) and 14 patients were died (14.4%).

Conclusion:
The existence of asymptomatic cases indicates the difficulty in identifying pediatric patients without clear epidemiological information. This finding suggests a dangerous situation if community acquired infections occur.

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Intravenously Administered Squalene in Nonhospitalized Adults with Early COVID-19

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ARTICLEINFO

Oral

Key words:
COVID-19, Squalene, Severity

ABSTRACT

Introduction:
No effective oral therapy exists for early coronavirus disease 2019 (COVID-19). Our aim was to investigate whether squalene could reduce COVID- 19severity in adult outpatients.

Materials and Methods:
A randomized, double-blind, placebo-controlled trial conducted. Symptomatic, nonhospitalized adults with laboratory or chest computed tomography scan confirmed COVID- 19or probable COVID- 19and high-risk exposure within 4 days of symptom onset were included. Squalene (100 mg once, followed by 100 mg daily for 5 days) or Normal Saline as placebo were infused intravenously. Symptoms and severity at baseline and then at days 3, 5, 10, and 14 using a 10-point visual analogue scale were measured. The primary end point was change in overall symptom severity over 14 days.

Results:
In this study 227 contributed primary end point data. Change in symptom severity over 14 days differed between the intravenously administered squalene and placebo groups ($P<0.05$). At 14 days, 8% of participants receiving squalene had ongoing symptoms compared with 35% receiving placebo ($P<0.05$). Medication adverse effects did not occurred in participants receiving squalene. With placebo, 35 hospitalizations occurred, including 1 hospitalized death. With squalene, 6 hospitalizations occurred including 1 hospitalized death ($P<0.05$).

Conclusion:
Squalene substantially reduces symptom severity in outpatients with early, mild COVID-19.

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Acute Kidney Injury in an Iranian Child Without Respiratory and Gastrointestinal Symptoms in COVID-19

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ARTICLEINFO

Oral

Key words:
Acute kidney injury, COVID- 19, Childern

ABSTRACT

Introduction:
Severe acute respiratory syndrome coronavirus 2(SARS-CoV-2) emerged in december, 2019, in wuhan, china, and has spread all over the world. This virus has different presentations and a widespread range of clinical manifestation in adults and children, ranging from mild respiratory symptoms to severe acute respiratory distress syndrome(ARDS) with clinical and radiological signs of severe bilateral Pneumonia.

Materials and Methods:
We reported a 14 years old boy who presented to the emergency room with signs of moderate dehydration. Physical examination revealed stable vital sign and blood oxygen saturation of 98% on room air. Heart and lungs souds were normal.His abdomen was soft but the patient had severe right and left flank pain. Neurologic examination was unremarkable.

Results:
C-reactive protein (CRP) consentration was 6 mg/L.CBC was normal. Creatinine was 4.5 and BUN was 60 during hospitalization.Na and k was in normal range . Chest X-Ray and spiral chest CT were normal,but nasopharyngeal swab resulted positive for SARS-CoV-2. After 7 days creatinine became 1.1 and BUN 17.

Conclusion:
Acute kidney injury may be present only with COVID- 19infection.

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Assessment of Knowledge, Attitudes and Practices Toward Prevention of Hepatitis B Virus Infection Among Healthcare Workers of Mashhad University of Medical Sciences, Iran

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ARTICLEINFO

Oral

Key words:
Attitude, Hepatitis B Virus (HBV), Infection prevention, Measuring, Practices, Knowledge

ABSTRACT

Introduction:
Hepatitis B virus infection is regarded as one of the significant occupational health hazards threatening healthcare workers (HCWs). The present study was to assess the levels of knowledge, attitudes, and practices toward HBV prevention among HCWs in Iran.

Materials and Methods:
This was cross-sectional study . Stratified sampling method was used and the Knowledge-Attitude-Practice Questionnaire was reproduced and distributed among of HCWs .The reliability and validity of the given questionnaire was also obtained. A 0.05 significant level was considered and the statistical analyzes were performed using the SPSS Software (version 16.0).

Results:
This study was performed on 681 HCWs. The results also showed that 448 HCWs (79.0%) had good levels of knowledge, 389 individuals (69.5%) were endowed with favorable levels of attitudes, and 391 of them (74.9%) had good levels of practices. Among the variables examined, a statistically significant relationship was only observed between age (P=0.024), occupational category (P=0.001), and knowledge. According to the results of Spearman's Rank-Order Correlation, there was only a significant but weak correlation between knowledge and attitudes (P=0.00, r=0.16).

Conclusion:
According to the results obtained from the parameters of attitudes and practices, it was assumed that levels of education concerning HBV infection were in need of improvements.

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Molecular Detection and Expression Level of Acra and Acrb Genes in Clinical Isolates of Klebsiella Pneumoniae

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ARTICLEINFO

Oral

Key words:
AcrA , AcrB , Klebsiella pneumoniae*, Real-time PCR*

ABSTRACT

Introduction:
Klebsiella pneumoniae is one of the main causes of hospital-acquired infections and the infections caused by its drug-resistant strains are going to be a global concern. The current survey was performed to evaluate the role of AcrAB efflux pump in ciprofloxacin resistance of *K. pneumoniae* isolates.

Materials and Methods:
In this study, 117 *K. pneumoniae* isolates were isolated from hospitalized patients at Mofid Children, Taleqani, and Imam Hossein hospitals in Tehran, Iran. The antibiotic sensitivity testing of these strains was done by the disk diffusion method. The molecular detection and expression level of acrA and acrB genes were done by PCR and real-time PCR methods, respectively.

Results:
Based on the results of antibiotic sensitivity testing colistin, imipenem, and meropenem were the most efficient antibiotics against the *K. pneumoniae* strains. The results of PCR method showed that 94% and 87% of *K. pneumoniae* isolates were positive for acrA and acrB genes, respectively. Moreover, expression level of AcrAB pump increased in 21% of isolates.

Conclusion:
A high incidence rate of acrA and acrB genes among K. pneumoniae isolates was identified. Therefore, suitable antibiotic therapy, detection of resistant strains and improvement of hygiene condition are necessary for controlling the hospital-acquired infections caused by drug-resistant strains of *K. pneumoniae*.

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Intraventricular Colistin Administration for the Management of Ventriculitis Caused by Haemophilus Influenza: A Case Report

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ARTICLEINFO

Oral

Key words:
Colistin , H.Influenza, Ventriculitis.

ABSTRACT

Introduction:
Neonatal central nervous system infection is a life-threatening condition causing severe morbidity and mortality. Bacterial ventriculitis can be a serious complication caused by delayed management of meningitis. Management of ventriculitis is difficult and usually needs both intravenous and intraventricular antibiotic administration. H.Influenza is a rare cause of ventriculitis. A 25-day-old female neonate presented with fever, seizures, and poor-feeding. She had had these symptoms for two weeks but she had not received appropriate diagnosis and management. At the onset of admission, she was intubated and received intravenous meropenem, vancomycin, and amikacin as empirical therapy. The CSF culture was reported as H.Influenza with sensitivity to ciprofloxacin. Brain MRI demonstrated severe hydrocephalus and diffuse leptomeningeal and ependymal enhancement in favor of ventriculitis. Initial intravenous therapy with a combination of colistin and ciprofloxacin was not successful. Therefore, after surgical placement of a ventriculostomy catheter, intraventricular administration of 150,000 IU colistin and 15mg gentamycin was initiated. After 3 weeks, CSF analysis became normal and the patient was discharged without any sequel. The combination of intraventricular and intravenous antibiotics should be used in ventriculitis. Colistin can be considered as a safe and effective choice for the management of multidrug-resistant Gram-negative infections in neonates and infants.

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Point Prevalence Study of Antibiotic Prescription and Resistance of 2 Pediatric Hospitals, A Local Report of Global PPS 2019, Sanandaj, Iran

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ARTICLEINFO

Oral

Key words:
Antibiotic resistance, Children, Hospital, Prescription, Point prevalence study.

ABSTRACT

Introduction:
Point Prevalence Surveys (PPSs) are excellent tools for providing data on in-hospital antimicrobial prescriptions. The surveys evaluate prescribing patterns of antimicrobials in the pediatric and neonatal wards of two referral centers in Sanandaj, Iran. We aimed to identify targets for quality improvement.

Materials and Methods:
Three PPSs on antimicrobial use in children and neonates hospitalized in the Besat teaching hospital and social security hospital in Sanandaj performed in three consecutive periods and different seasons in 2019. An approved and standardized protocol based on the Global Point Prevalence Survey of Antimicrobial Consumption and Resistance used to validate data.

Results:
Out of a total of 264 and 142 admissions in pediatric and neonatal wards, respectively, 75% of pediatric inpatients and 67% of neonates received at least one antimicrobial. Ceftriaxone (60.8%) and ceftazidime (12.9%) in pediatric wards and ampicillin (42.1%) and cefotaxime (23.4%) in neonatal wards were the most commonly prescribed antibiotics. The antimicrobial parenteral route of administration in pediatric wards and neonatal were 97.9% and 100%, respectively. Empirical antibiotic therapies in pediatric and neonatal wards were 100% and 99%, respectively.

Conclusion:
The high percentage of antimicrobial use and empirical therapies could be the targets for quality improvement in our hospitals.

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Total Knee Replacement ; Prevention of Infection

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ARTICLEINFO

Oral-Panel

Key words:
Infection, Prevention
Total knee replacement.

ABSTRACT

Introduction:
One of the most important & dreaded complications of total knee replacement surgery is infection. It is less common and hard to treat. The rate of infection is 1% to 2% according to our estimation. Although there is several treatment methods but TKA infection poorly response to each one that in some cases it ends to loss of affected limb. The best solution for this complication is to prevent it predisposing factors those bring the patients into the risk of TKA infection. These prevention factors include great parts: Preoperative & intraoperative.

Materials and Methods:
TKA Infection diagnosis is based on clinical findings include swelling erythema pain and the moat important , sinus tract.

Results:
There are several treatment options. In those affected by low virulence microrganisms antibiotic suppression with debridement will be useful. In sever cases 1 or 2 stage exchange arthroplasty and arthrodesis will be helpful. In the most sever ones that preserving the limb can cost the patient's life above knee amputation is our last choice.

Conclusion:
At the end the most important and easy way to manage the TKA Infection is to prevent it from happening.

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Modification Aspects of Advanced Cardiopulmonary Resuscitation in Covid-19 Patients

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ARTICLEINFO

Oral-Panel

Key words:
ACLS- COVID-19.

ABSTRACT

Introduction:
One of the most important procedures that may contaminate medical personnel during the procedure is advanced cardiopulmonary resuscitation. This article discusses ways to reduce staff contamination during cardiopulmonary resuscitation.

Materials and Methods:
Suspicious, probable, or definite COVID-19 patients who, for any reason, develop cardiopulmonary arrest and require advanced resuscitation during their emergency treatment are at high risk due to the possibility of aerosol formation and proliferation during resuscitation. While limiting the personnel involved in the resuscitation operations of such individuals, the production or expansion of aerosols by these patients should be prevented in various ways.

Results:
The following can be mentioned as effective methods to reduce the possibility of infection of medical personnel during advanced resuscitation of patients suspected COVID-19: full and appropriate use of personal protective equipment during resuscitation, covering the patient's mouth and nose with a mask and limited use of bag ventilation mask in these patients or use with confidence that the mask is completely covered.

Conclusion:
Due to the increasing number of critically ill patients with COVID-19 who require advanced cardiopulmonary resuscitation, there is a need to develop a protocol that minimizes the possibility of aerosol production and proliferation in the treatment of these patients.

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Health Care Workers; Medical or Respiratory Masks in COVID-19 Pandemic Setting Care

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ARTICLEINFO

Oral-Panel

Key words:
Health care workers, Personal protective equipment.

ABSTRACT

Introduction:
Since respiratory droplet is the proven transmission way of COVID-19, health care workers as people who are most exposed to the virus, should be aware of infection control measures specially wearing appropriate facial masks when caring for or dealing with patients in different health settings.

Materials and Methods:
All patients and visitors should cover mouth and nose with either medical or cloth masks; however cloth masks shouldn't be used in health care settings. Masks with exhalation valve or vent should be avoided since they do not provide source control, unless a medical mask is placed on top of it.

Results:
Respiratory masks (including N95 and FFP2) has no priority to medical masks in routine care, but should be used in aerosol generating treatment and procedures.

Conclusion:
To sum up; it's important to use appropriate personal protective equipment (PPE) in appropriate condition, to optimizing the use of PPE and save the sources especially when the PPE supplies are limited.

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Infection Control of Blood Transfusion in Postpartum Hemorrhage

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ARTICLEINFO

Oral-Panel

Key words:
Postpartum hemorrhage, Transfusion-transmitted Infection, Prevention of infection

ABSTRACT

Introduction:
Postpartum hemorrhage (PPH) is one of the main causes of maternal mortality worldwide. Massive transfusion protocols allow for rapid and appropriate response to hemorrhages exceeding 1,500 mL of blood loss. But infectious agents can potentially be transmitted through blood transfusions.

Materials and Methods:
Transfusion-transmitted infection, including bacteria, viruses, and parasites. Transfusion-transmitted bacterial infection is an important complication of blood product administration. So viral agents can be transmitted include Human immunodeficiency virus, Hepatitis viruses, Cytomegalovirus, Human T-cell lymphotrophic viruses and Parvovirus B19. A wide spectrum of organisms has been associated with transfusion-transmitted bacterial including skin and enteric and environmental organisms.

Results:
Transfusion-transmitted bacterial infection suspected by clinical manifestations include fever, rigors, tachycardia, and rise or fall in systolic blood pressure. In this situation transfusion should be stopped, the patient should be resuscitated, and blood should be collected for culture and evaluation for evidence of transfusion reaction and initiating broad-spectrum empiric antibiotic therapy.

Conclusion:
The common preventive strategies include donor-selection protocol, hand hygine, skin disinfection, sample diversion, leukodepletion, and detection of contamination by culture. And finally, preventing postpartum hemorrhage by actively intervening in the third stage of labor is the best way to prevent the side effects of blood transfusio.

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Blood-borne Infections

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ARTICLEINFO

Oral-Panel

Key words:
Blood born, Infection, Transmission.

ABSTRACT

Introduction:
In general, infections are the most common diseases in the world and are very important. They can be easily prevented and treated at a low cost. They can be spread quickly, especially in the family and community. Blood barrier is a suitable environment for the growth and multiplication of microorganisms. Most viral, bacterial, and parasitic infections can be transmitted through the blood.

Materials and Methods:
Ways of transmission:
1. Through contact with the blood of an infected person such as: CCHF, HIV, HBV
2. Through transfusion of blood and contaminated blood products such as: HBV, HCV, HIV, HTLV1, STD
3. Through sexual contact such as: HIV, CMV, HSV, HBV
4. Through injections such as: contaminated needles, razors and contaminated dental supplies.
5. Transfer of mother to child (placenta)

Results:
Viruses and viral infection: HCV, HTLV1, CMV, ZIKA Virus. CCHF. Bacterial infection: Brucella, Salmonella, T.B, Intestinal gram-negatives Bacilli. Neisseria gonorrhoeae-Treponema palladium-Chlamydia-Trichomonas vaginalis. Parasitic infections: Malaria-Toxoplasma Among the factors that are transmitted through the blood, viruses are more and more important because they do not have special treatment.

Conclusion:
Transmission of the infection through the blood is an obvious fact. Fortunately, today transfused blood is screened for some infections. Infection is transmitted from mother to fetus through placental blood.

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Antibiotic Resistances, Clinical Implication, Prospect for Antibiotic Stewardship programs

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ARTICLEINFO

Oral-Panel

Key words:
Antibiotic resistance, Antibiotic stewardship.

ABSTRACT

Introduction:
Severe bacterial infections resistant to existing antibiotics are becoming a significant health problem around the world. They are graver, requiring a much more expensive diagnosis cost and longer and more complex treatments. "Post-Antibiotic Era" was first declared by the Centers for Disease Control and Prevention (CDC) in 2013 and then by the World Health Organization (WHO) in 2014. It has been warned by 2050, even mild infections could cause serious medical problems, and antimicrobial resistance attributable mortality will prevail those with cancer. In fact, in some parts of the world, there are already signs of this Post-Antibiotic Era. In Nigeria, China, India, and Russia, over 95% of persons carry bacteria resistant to more than 90% of available antibiotics.

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COVID-19 Pandemic and occupational Medicine Implications

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ARTICLEINFO

Oral-Panel

Key words:
COVID-19, Occupational medicine, Prevention.

ABSTRACT

Introduction:
COVID-19 is currently has spread across the world and no industries are left unaffected by COVID-19 pandemic. The characteristics of SARS-CoV-2 virus and its transmission patterns could lead to high transmission rates among workers. The workforce is greatly impacted by this pandemic, and creating a comfortable and safe workplace is critical in enhancing employees' work attendance and performance. Occupational physicians play an essential role in planning strategies for corporate preparation, response, and business continuity. Thus, here we summarized some key concerns relating to occupational medicine professionals in coping with the COVID-19 pandemic.
Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) was first recognized in December 2019 and since then it has become a global pandemic and has spread to all parts of the world. The disease now has affected more than 300 million and killed about 1 million people.
Materials and Methods:
We investigated different databases such as Scopus, PubMed, and Google Scholar from 2019 to 2020. Also, we explored the instructions CDC, NIOSH, OSHA, and WHO.
Results:
The results indicate that all the members of the society including employers, employees and laborers should be completely ready to overcome the new coronavirus. This point can have affirmative effect on the reduction of lost workdays and workers' absenteeism, and the retardation of the infection spread.
Conclusion:
Occupational medicine professionals have the appropriate skills to plan preventive measures when the causative factors are identified and their mechanism of action is known. However, in the case of the COVID-19 pandemic, this process is poorly understood, making it more complex to determine the most suitable prevention and control strategies

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How to Decide on Returning to Work in Covid-19 ?

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ARTICLEINFO

Oral-Panel

Key words:
COVID-19, Return to work, Recovered employees.

ABSTRACT

Introduction:
Since the emergence of COVID-19 pandemic, widespread restrictions have been introduced globally. Considering the impacts of these measures on economic activities, it is crucial to decide on employees' returning to work in a way that cutting the chains of transmission is also maintained. The aim of this article is to review the current guidelines about deciding on the end of the isolation and return to work of employees recovered from COVID-19.

Materials and Methods:
The Google Scholar, PubMed, and Scopus databases were reviewed from 2019 to 2020, as well as Centers for Disease Control and Prevention (CDC), Occupational Safety and Health Administration (OSHA), National Health Service (NHS) and Iran Ministry of Health and Medical Education guidelines.

Results:
Based on this review determining the timing of return to work is mainly based on clinical symptoms and Reverse Transcription Polymerase Chain Reaction) RT-PCR (test. Recently, serology tests have also been addressed. Notwithstanding, occupational exposures should not be overlooked.

Conclusion:
There is a general consensus on ending isolation of the individuals in a 10 to14-day period after the onset of the symptoms in the symptom-based strategy. Regarding test-based strategy two negative RT-PCR tests are required. Presently, serologic tests are not recommended for making decision about work resumption.

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Clinical Points in Management of Fever in Children with Chemotherapy-Induced Neutropenia

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Article type:

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Received:
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Key words:
Children, Fever, Neutropenia.

ABSTRACT

Introduction:
About one third of children with chemotherapy-induced neutropenia has fever (10-60%) and the mortality rate is approximately 7.5in 1000 patients. Bacteremia is the most common diagnosed infection but pneumonia, meningitis, mucositis and mycosis can occur too.

Materials and Methods:
1/Fever can be the sole sign of occult infection in these children
2/Sometimes, there is serious infection without fever. So consider general appearance and lethargy.
3/ Receiving glucocorticoid may subside fever in spite of severe infection
4/ Neutropenia itself may subside the signs of infection and the signs may reappear with resolving neutropenia
5/ Every possible site of infection should be examined thoroughly every day
6/ Even minor signs like mild erythema or tenderness should be concerned
7/ Abnormal vital signs especially, tachycardia inappropriate to fever, hypotension, increase respiratory rate, wide pulse pressure

Results:
All mucus membranes particularly perianal area should be thoroughly examined for early detection of mucositis and barrier breakage,

Conclusion:
Risk factors for serious infection in these children include:
●intensive chemotherapy-
●Central venous catheters especially peripherally inserted catheters or tunneled external catheters
●Breakdown of skin and mucosal barriers
●Concomitant altered humoral and cellular immunity,

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Dilemmas on Management of Post Liver Transplant CMV/EBV Infection in COVID-19 Pandemic

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ARTICLEINFO

Oral-Panel

Key words:
COVID-19, CMV, Liver transplant.

ABSTRACT

Introduction:
Post-Liver transplant viral infection continues to cause allograft dysfunction and remain major complication post transplant. CMV and EBV can reactivate following liver transplantation due to underlying state. Similarly, in COVID-19 pandemic, post-transplant patients are at risk of SARS-Co-V2 infection.

Materials and Methods:
We have overlap symptom with CMV, EBV, COVID-19 infection and should be aware about clinical manifestation and post-transplant management of them. The most common clinical manifestation of CMV disease in post LT situation is viral like syndrome (60%) with bone marrow suppression with fever, Malaise, Neutropenia, leukopenia and thrombocytopenia, 70 % of tissue invasive CMV present as GI and Lung manifestation that all of them could be mistaken with COVID-19 . And we have also Indirect effects by CMV infection such as acute rejection, Chronic rejection, Opportunistic infections (bacterial, fungal and viral infection such as EBV/PTLD &COVID-19).

Results:
Thus have similar manifestation between CMV, EBV, COVID-19. Optimizing immunosuppression is an important step in reducing the severity of allograft damage in the treatment of posttransplant viral infections.

Conclusion:
Post LT viral infections can cause significant allograft dysfunction. Early diagnosis and approach can decrease the infective process and preserve allograft function.Thus CMV,EBV,COVID-19should be considered in the differential diagnosis of post-transplant viral infections at this time.

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Probiotics in Primary Immune Deficiency

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ARTICLEINFO

Oral-Panel

Key words:
Primary immune deficiency, Probiotic, Prebiotic.

ABSTRACT

Introduction:
Probiotics are live microorganisms with beneficial effects in human health. Their usage returns back to many centuries ago, even before microbes' discovery. Probiotics are in different foods such as yogurt, kefir and other fermented products. Prebiotics are those types of dietary components that feed these useful and friendly bacteria. Many foods contain prebiotics such as onion, garlic, banana, apple, barely and oat. Primary immune deficiency (PID) is a group of inherited disorders. These heterogeneous disorders are predisposing to recurrent infections, autoimmune disorders and neoplastic lesions. They are usually under prophylactic antibiotics and so their gut microbiota is impaired.

Materials and Methods:
In few past decades, numerous studies have revealed important role of balanced gut microbiota composition in maintaining and improvement of health. Especially their efficacy in diarrhea and eczema has been suggested. Unfortunately, while PID patients frequently complain of chronic abdominal pain, diarrhea, and severe unresponsive dermatitis and so on, there are few experience about probiotic administration in these patients. In fact, immune compromised condition usually considers as warning status for probiotic usage.

Results:
Although it seems prebiotic consuming and also administration of local probiotic products are very helpful and even safe.

Conclusion:
In addition, there are few reports of probiotic administration in certain primary immune deficiencies especially humoral immune deficiencies.

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Fever and Neutropenia in Pediatric Hematopoietic Stem Cell Transplantation (HSCT)

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ARTICLEINFO

Oral-Panel

Key words:
Cancer, Fever, Hematopoietic stem cell transplantation, Neutropenia, Pediatrics.

ABSTRACT

Introduction:
Fever and Neutropenia (FN) is a common complication of pediatric Hematopoietic Stem Cell transplantation (HSCT) ,also fever is frequently the only clinical manifestation of serious infection in a Neutropenic patients.

Materials and Methods:
Infection is one of the major causes of treatment related mortality in pediatric HSCT. There are a heterogeneous group of varying risks of infection in pediatric HSCT with Fever and Neutropenia . International Pediatric Fever and Neutropenia Guideline Panel are provided a Clinical practice Guideline (CPG) based of Risk – stratification. The Recommendations of Clinical practice Guideline (CPG) are related to different challenges of FN in pediatric Cancer and HSCT. They includes: initial presentation of FN,ongoing management, empirical antifungal treatment.

Results:
In this presentation we will introduce a 10 years old boy of Acute Myelobastic leukemia(AML -Non M3) in complete remission , result of Allogenic - HSCT from Match sibling Donor with MA conditioning regimen & the challenges of FN during the process of HSCT.

Conclusion:
Timely in-patient treatments as an emergency and prompt initiation of empiric, broad-spectrum, intravenous antibiotic (IV) therapy may be the single most important life-saving intervention in FN patients.

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Antibiotics for Common Upper Respiratory Tract Infection in Pediatric Patients

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ARTICLEINFO

Oral-Panel

Key words:
Antibiotics, Pediatrics, Upper Respiratory Tract Infection.

ABSTRACT

Introduction:
We as pediatric providers are trying to reduce unnecessary antibiotic prescriptions for common childhood Upper Respiratory Tract Infection, Pediatrics.

Materials and Methods:
Unnecessary antibiotics can promote resistant bacteria. Resistant. bacteria can be spread to others in the family and community. Frequent antibiotics use may also cause many side effects.

Results:
On average, about 8 out of 10 children with these infections in medical studies get better without antibiotics. In comparison, if all 10 children took antibiotics only about 1 extra child would get better, and there is no way of knowing in advance who would benefit. Also, children less than age 2 may benefit more from antibiotics because of a higher risk of complications.

Conclusion:
Now the Experts provide watchful waiting as an approach to ear infections and nose/sinus infections with the use of antibiotics only if symptoms fail to improve over time (up to 3 days).
Initial antibiotics are usually appropriate for infants, young children, or if severe symptoms or high fever are present. Children with a runny nose without fever or other manifestations of illness do not need antibiotics.

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The Challenge of Providing Emergency Services to 19 Patients while Maintaining Staff Safety

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ARTICLEINFO

Oral-Panel

Key words:
COVID-19, Emergency department, Risk management.

ABSTRACT

Introduction:
The emergency department treating patient with COVID-19. Treating patients with acute respiratory syndrome and others is one of the major challenges to personnel as well as infection control in addition to the inherent duty of the emergency department maintaining patient safety and optimal service.

Materials and Methods:
Familiarity and lack of mastery of the general dimensions of the disease, manpower and increase in medical staff, diagnostic and therapeutic structure, referral and admit protocol for covid-19, physical space, Consumption equipment's, psychological problems, Corpse management and proper interaction with the pre-hospital emergency among the main challenges in managing this infectious crisis.

Results:
Following solutions are suggested: Development of simple scientific instructions and monitor its proper implementation, determine the appropriate line of communication in the admission and dispatch of patients, providing appropriate equipment and maintenance, personal protective equipment, determining the patient flow screening, triage, Para clinic, diagnostic imaging , treatment regimen, surge capacity, attention to psychological issues, mechanisms of employing staff, incentive mechanisms of employer, proper communication with higher level. Different scenarios for dealing with crises should be developed and practiced in emergency rooms and hospitals.

Conclusion:
Different scenarios for dealing with crises should be developed and practiced in emergency department.

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Nutrition, Immunity and COVID-19

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ARTICLEINFO

Oral-Panel

Key words:
Infection, Nutrition.

ABSTRACT

Introduction:
The immune system protects the host from pathogenic organisms (bacteria, viruses, fungi, parasites). To deal with this array of threats, the immune system has evolved to include a myriad of specialized cell types, communicating molecules and functional responses.

Materials and Methods:
A number of vitamins (A, B6 ،B12, folate, C, D and E) and trace elements (zinc, copper, selenium, iron) have been demonstrated to have key roles in supporting the human immune system and reducing risk of infections. Other essential nutrients including other vitamins and trace elements, amino acids and fatty acids are also important.

Results:
Dietary approaches to achieve a healthy microbiota can also benefit the immune system. Severe infection of the respiratory epithelium can lead to acute respiratory distress syndrome (ARDS), characterised by excessive and damaging host inflammation, termed a cytokine storm.

Conclusion;
Gut dysbiosis is a feature of disease including many infectious diseases and has been described in COVID-19.

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Central Nervous System Infections in Iran: The Need for A Clinical Data Registry

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ARTICLEINFO

Oral-Panel

Key words:
Central nervous system infections, Clinical data registry, Encephalitis, Meningitis.

ABSTRACT

Introduction:
Central nervous system (CNS) infections are serious disorders that are associated with significant morbidity and mortality. Despite the advent of therapeutic and prophylactic measures, the overall mortality rate of CNS infections remains high and among survivors, many develop long-term sequelae. The burden of CNS infections is unequally distributed in different geographic regions and predominantly impacts low- and middle-income countries. CNS infections are caused by a diverse spectrum of microorganisms and risk assessment is highly important in predicting the likely pathogen leading to rational treatment.

Materials and Methods:
We searched PubMed with the search strategy (("Iran"[Mesh]) OR "Iran") AND "Central Nervous System Infections"[Mesh]) OR "Meningitis" [Mesh]) OR "Encephalitis"[Mesh]) OR "Meningoencephalitis" [Mesh]) OR "Brain Abscess"[Mesh]) OR "Epidural Abscess"[Mesh]) OR "Empyema, Subdural"[Mesh]).

Results:
We found 149 papers on CNS infections in Iranian patients, including 18 reports of cases of viral meningitis, 54 bacterial meningitis, and 9 viral encephalitides. However, they provided limited practical information about the incidence, mortality rate, or burden of different infectious CNS syndromes in Iran.

Conclusion:
Clinical data registries are needed to collect, organize, and display clinical information of patients with CNS infections. Using the information, physicians and other healthcare professionals can evaluate and improve outcomes for patients.

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The Drug Interactions Of The Antibiotics

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ARTICLEINFO

Oral-Panel

Key words:
Antibiotics, Drug interaction, Pharmacokinetic.

ABSTRACT

Introduction:
A drug interaction is defined as concomitantly administered medications that interfere with one another's efficacy or safety profile. There are lots of drug interaction between antibiotic agents and other medications. In the early 1990s, patients experienced serious cardiac toxicity after taking antihistamine or prokinetic drugs in combination with macrolides or azoles. In this presentation we will talk about most important drug interactions of antibiotics.

Results:
Pharmacokinetic interactions induced by changes in its absorption, distribution, metabolism or excretion. For example in absorption interactions, medications with pH-dependent dissolution could be affected by antacids, PPIs or H2Bs like some oral cephalosporines. Tetracyclines/ fluoroquinolones also may be chelated with some cations resulting in their reduced absorption. In distribution phase, for example rifampin is an inducer of PGP and decreased absorption of medications that are substrates for PGP. For metabolism interaction, also rifampin is a good example as a potent enzyme inducer and also azoles as enzyme inhibitor. In excretion phase, the organic anion transport proteins (OAT1 and 3) is an important transporter which facilitates excretion of weakly acidic drugs, such as penicillins; Probenecid is an inhibitor of OAT1 and thus leads to decreased renal clearance.

Conclusion:
Drug interactions of antibiotics are important and need special attention.

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Protozoan Infection in Immunocompromised Patients

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ARTICLEINFO

Oral-Panel

Key words:
Immunosuppression, Opportunistic infections, Protozoa.

ABSTRACT

Introduction:
Protozoan parasites can cause infection in immunocompromised (IC) patients. The diseases with impaired cell immunity including solid tumors on chemotherapy, hematologic neoplasia, organ transplantation, chronic diseases for which cytotoxic or under high-dose corticosteroid therapy make the host susceptible to protozoan infection.

Materials and Methods:
Current information concerning the incidence of the protozoan parasites in Iran and other countries are presented. Special attention is paid to the protozoan parasites in IC patients.

Results:
Toxoplasma gondii, Trypanosoma cruzi, Cryptosporidium parvum, Isospora belli, Cyclospora cayetanensis and microsporidia are the most common cause of diseases in IC individuals. Babesia spp. Malaria parasites, Entamoeba histolytica, Trichomonas vaginalis, and Balantidium coli are less frequently and normally do not have opportunistic behavior. The protozoa with latent endogenous infections such as Toxoplasma gondii trigger a severe form of the disease, systematic and fetal in IC patients, especially if there is no early diagnosis and no adequate specific therapy.

Some intestinal protozoa with exogenous root can also present opportunistic behavior (Cryptosporidium parvum, Isospora. belli, Giardia lamblia, and Blastocystis spp.) and show a greater severity of clinical symptoms in the IC group.

Conclusion:
Diagnosis and quick specific treatment of these parasites in IC patients are necessary to decrease morbidity and mortality related to these infections.

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Management of a Child with Febrile Neutropenia and Hematopoietic Stem-Cell Transplantation

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ARTICLEINFO

Oral-Panel

Key words:
Children, Hematologic stem cell transplantation.

ABSTRACT

Introduction:
Risk stratification of febrile neutropenic patients is the first step of their management.In high risk HSCT children, monotherapy with an antipseudomonal B lactam, a fourth generation cephalosporin, or a carbapenem is used. An aminoglycoside or glycopeptide is indicated in patients when a resistant infection is suspected. In patients who respond to initial empiric antibiotic therapy double coverage therapy for gram negative infection or empiric glycopeptide is not indicated after 24 to 72 hours. In clinically unstable persistent fever cases, escalate the initial empiric regimen to include coverage for resistant gram-, gram+ and anaerobic bacteria.In all patients discontinue empiric antibiotics who have negative blood culture at 48 hours, are afebrile for at least 24 hours and have evidence of marrow recovery. Children with HSCT are in high risk for invasive fungal disease.In these patients CT of lungs and imaging of abdomen is recommended but Sinus CT is not considered routinely. In IFD high risk patients with more than 96 hours FN unresponsive to broad spectrum antibacterial agents, caspofungin or liposomal amphotericin B can be initiated empirically.Antibiotics should be used.

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Invasive Fungal Infections in Hematopoietic Stem Cell Transplant Recipients

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ARTICLEINFO

Oral-Panel

Key words:
Hematopoietic stem cell transplant(HSCT)Invasive fungal infections(IFIs).

ABSTRACT

Introduction:
Invasive fungal infections (IFIs) cause considerable morbidity and mortality in hematopoietic stem cell transplant recipients. Aspergillosis, candidiasis, fusariosis and mucormycosis are the most important infections reported in patients with hematologic malignancies that undergo HSCT. Diagnosis of IFI is difficult with the sensitivity of the gold standard tests often less than 50%. Diagnosis is therefore based on a combination of the symptoms and signs, histopathology and mycological growth and the detection of fungal wall components. There are various treatment strategies that can be used to manage IFIs. For patients at risk for IFI antifungal prophylaxis is an attractive strategy.
The goal of this review is to description epidemiological and clinical features, laboratory findings, diagnosis, management and outcomes of IFI in HSCT recipients.

Materials and Methods:
In this review, a number of studies on clinical manifestations, diagnostic methods, treatment options and prophylactic strategies will be mentioned.

Results:
Several factors are important in contributing to HSCT recipients' risk for IFIs such as immune system disorders. Aspergillosis, candidiasis, fusariosis and mucormycosis are the most important infections in this group. Understanding about the charachteristics of these infections will help to management and improvement outcomes.

Conclusion:
Accurate knowledge of IFIs, can help prevent and treat them in a timely manner.

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Role of Next-Generation Sequencing in Prosthetic Joint Infection

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ARTICLEINFO

Oral-Panel

Key words:
Arthroplasty, Hip, knee, NGS, Prosthetic, PJI.

ABSTRACT

Introduction:
Over the last decades, extensive research have been conducted in the diagnosis and treatment of implant-related infection or periprosthetic joint infection (PJI).
PJI is not only devastating but also a costly complication. Diagnosis and management of PJI is always challenging for orthopedic surgeons. The lack of gold standard diagnostic tools of PJI, making distinction between septic and aseptic failures difficult. Controversies are not limited to diagnosis, choosing the optimal treatment strategy is a source of significant debate.
Materials and Methods:
Next generation sequencing is a great technique for sequencing of DNA and recently is widely used in different field of medicine. There is along standing interest in employing molecular techniques for diagnosis of PJI in a more precise manner.
Results:
There are emerging evidence that supporting use of NGS for precise diagnosis of PJI.
Conclusion:
Next generation sequencing may be a useful modern technique in diagnosis of PJI. It can help to identify the causative microorganisms, especially those organisms that potentially can escape from conventional culture media.

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Misdiagnosis of COVID-19 as Acute abdomen in Children: Case Report of Atypical Presentation

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ARTICLEINFO

Oral-Panel

Key words:
COVID- 19, Gastrointestinal presentation, Pediatrics.

ABSTRACT

Introduction:
Children have been observed to have milder clinical manifestations of the virus than do adults. Gastrointestinal symptoms have not been recognized in the early stages of the pandemic, and are infrequently reported in the literature on infection in adults. It has been reported that a high mean viral load in the nasopharynx is associated with the occurrence of diarrhea in patients with severe acute respiratory syndrome. We report two cases of acute surgical abdomen with atypical presentation of COVID-19 in children with gastrointestinal symptoms.

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Multisystem Inflammatory Syndrome in Children; Definition, Diagnosis and Management

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ARTICLEINFO

Oral-Panel

Key words:
COVID- 19, MIS-C, Pediatrics.

ABSTRACT

Introduction:
Although coronavirus disease 2019 (COVID-19) caused by SARS-CoV-2 is usually mild in children, in rare cases, children can be severely affected. As of late April 2020, reports from the United Kingdom surfaced describing a new hyper-inflammatory disease that is temporally associated with SARS-CoV-2 infection. Multisystem Inflammatory Syndrome in Children (MIS-C) is similar to incomplete Kawasaki disease (KD) or toxic shock syndrome. While the incidence of MIS-C is uncertain, it appears to be a rare complication of COVID-19 in children. The estimated incidence of laboratory-confirmed SARS-CoV-2 infection in individuals <21 years old was 322 per 100,000 and the incidence of MIS-C was 2 per 100,000. It tends to be most severe in infants <1 year of age and in children with underlying health problems. According to three definition of MIS-C by Royal College, Center for Control of Disease (CDC) and World Health Organization (WHO), prolonged fever is the key diagnostic characteristic of this disorder. In this presentation, its considerations, treatment and clinical diagnostic approach have been discussed.

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Surgical Site Infections in Liver transplant Recipients

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ARTICLEINFO

Oral-Panel

Key words:
Liver transplant,
Surgical site infection.

ABSTRACT

Introduction:
There are several risk factors which may increase the risk of post-transplant surgical site infections in liver transplant recipients.

Materials and Methods:
Long duration of surgery even in the experienced hands, prolonged hospital stay, low pre-transplant hemoglobin level, low serum albumin level, high pre-transplant bilirubin level, renal insufficiency, re-transplantation and infection in deceased donor are among the most common risk factors for post-transplant infections. Leakage in the biliary anastomosis and choledochojejunostomy (compared to duct-to-duct anastomosis) are also known to increase surgical infections. On the other hand, Immunosuppression may increase the rate of infection and mute the immune response to infections especially using higher doses of immunosuppression using in treatment of rejection. Bacteria and fungal infections are usually responsible for wound, abdomen and organ/space infections within the first 8 weeks after transplantation. Surgical site infection can significantly increase graft loss, mortality, hospital stay and transplant charges.

Results:
The main effective strategy should be focused on surgical prophylaxis to prevent surgical site infections rather than infection treatment.

Conclusion:
Suitable antibiotic which is given within 60 minutes of incision (Piperacillin/Tazobactam or Ampicillin/Sulbactam), anti-fungal drugs and strict preventive protocols in the operating theatre mandatory for all the staff may decrease the post-transplant surgical infections.

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Investigating the Complications of Transplacental Needle Passage in Amniocentesis

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ARTICLEINFO

Oral-Panel

Key words:
Amniocentesis, Abortion, Amnionitis, Complications, Preterm labor.

ABSTRACT

Introduction:
Amniocentesis is the most commonly used method for diagnosis of aneuploid and other genetic disorders of the fetus. Cautious should be taken when entering the amniocentesis needle to avoid entering the placenta. The purpose of this study was to investigate the consequences of needle transposition from the placenta during amniocentesis.

Materials and Methods:
In a cohort study, 1000 pregnant women candidates for amniocentesis were selected from Mashhad Perinatology Clinic, 2014-2016. A needle was inserted into the gestational sac and 20cc amniotic fluid was taken, using the ultrasound guidance. Passage or not passage of needle through the placenta was recorded and complications such as abortion, spotting, preterm labor, and rupture of membrane in each group were compared. Data analysis was done in SPSS applying Kolmogorov-Smirnov test, t-test, and Chi-square.

Results:
The mean age of participants was 33.4 years old (16-48 years of age). Spotting after amniocentesis was recorded in 1.4% nontransplacental amniocentesis and in 6.1% of transplacental amniocentesis (RR; 6.85, P=0.03). There was no significant relationship between needle passage through the placenta and other complications such as abortion, amnionitis, preterm labor, and amniotic fluid leakage following amniocentesis (p=0.08).

Conclusion:
Current findings showed that transplacental amniocentesis increases the probability of spotting following amniocentesis.

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Epidemiological study of children with COVID-19 , a multicenter study in Razavi and North Khorasan

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ARTICLEINFO

Oral-Panel

Key words:
COVID-19 , Children, Epidemiological characteristics

ABSTRACT

Introduction:
COVID-19 disease, which became widespread at the end of 2019, has become a public health threat worldwide, with children being no exception. The aim of this study was to determine the associated epidemiological characteristics in children with COVID-19 .

Materials and Methods:
All records of COVID-19 patients in the age range of 0 to 18 years in hospitals admitted children with COVID-19 in Razavi and North Khorasan from the beginning of the outbreak to the fifth month of 2020 were reviewed. Data collection was done through a checklist.

Results:
Associated disease was observed in 28.6% of patients. A total of 31 patients (88.6%) were discharged. 23 patients (65.7%) were male and 50% of deaths observed in them. Mean±STd of corona cases in relatives for discharged and deceased patients were 0.34±0.129 and 0.0±0.0, respectively, which according to the p-value of 0.043, the relationship between the number of corona cases in relatives and the patient's final condition was significant. There was no significant relationship between family status, place of residence, and medical records of patients with the final status of patients.

Conclusion:
This study did not show a significant difference in the final outcome of children with COVID-19 in terms of epidemiological characteristics.

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Review Of Nutritional Management In Patient with COVID-19 In Hospital Unit

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ARTICLEINFO

Oral-Panel

Key words:
COVID-19, Enteral nutrition, ICU, Parenteral nutrition.

ABSTRACT

Introduction:
The aim of this study was to review of nutritional management in patient with COVID-19

Materials and Methods:
We included ESPEN, ASPEN and other guidelines related to nutrition and COVID-19.

Results:
According to the practical guidelines after admission in the ward, nutrition should be initiated whenever possible. If dietary counseling is not sufficient to reach nutritional goals, Oral nutritional supplements should provide and continued for one month. Enteral nutrition(EN) should be implemented if oral intake is expected to be impossible for more than three days or expected to be below half of energy requirements for more than one week. In ICU patients, hypocaloric nutrition should be administered in first 2 days of acute illness, then 80%of EER after the first 3 days of ICU admission and increase it after 7 to 10 days. Protein prescription of at least 1.2 to 2.5g/kg/day is also recommended. It should be started early EN within 24–36 hours of ICU admission or within 12 hours of intubation with standard high protein, polymeric formula.PN should be initiated as soon as possible in moderate to severely malnourished patient for whom early gastric EN is not feasible.

Conclusion:
It seemed that more trials are needed to be performed specially in areas of pediatrics.

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Diagnosis of Cystic Echinococcosis: New News, New Aspects

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ARTICLEINFO

Oral-Panel

Key words:
Cystic echinococcosis, Diagnosis, Hydatid cyst

ABSTRACT

Introduction:
Diagnosis of cystic echinococcosis (CE)/hydatidosis which is one of the neglected tropical diseases by WHO, is mainly based on imaging and serological tests. In liver CE, the stage-specific approach by ultrasound imaging should be more popular in clinical practice. As the cysts classified as CE4 and CE5 stages usually do not require any treatment and should be watched and monitored in a reasonable time. Serology, with different procedures for evaluation of specific antibodies against Echinococcus species' antigens, has been used as a confirmatory step with various levels of sensitivity/specificity correlating with the involved species, lesion location, or antigen used. The application of different recombinant antigens has been used in different counties. However, the application of native antigens is encouraged due to the variability of antigens in different geographical areas. Using a lateral flow test as a rapid diagnostic test with a reliable antigen is encouraged. A proteomics approach is an increasing approach especially in the view of follow-up. Molecular diagnosis for post-operation identification is also used. Protein profiles analysis can also be used for the identification of potential molecular markers for the development of diagnostic and follow-up tools. In this regard, proteomics analysis of the composition of CE and patient's sera have been used to identify proteins from both Echinococcus spp. and the host. It can be used for the differentiation of the patients to subgroups and also to show the identification of potential diagnostic biomarkers. Application of plasma and microRNA for post-surgery follow up are new and should be applied in a large scale study to prove using these techniques for follow-up the disease.

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Epidemiological aspects of Cutaneous and visceral leishmaniasis in Iran and other Middle-East countries

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ARTICLEINFO

Oral-Panel

Key words:
Epidemiology, Iran, Leishmaniasis.

ABSTRACT

Introduction:
Leishmaniasis is one of the most important protozoan disease caused by 53 species of Leishmania parasite. At least 5 epidemiological and clinical forms of leishmaniasis containing cutaneous leishmaniasis(CL), muco-cutaneous leishmaniasis (MCL), visceral leishmanisis (VL), lupoid-recidivan leishmanisis (LR), post kala-azar dermal leishmanisis (PKDL), are known. CL is divided to 3 forms include on zoonotic CL (ZCL), anthroponotic CL (ACL) and diffuse CL (DCL). Referring to the WHO report, almost 69% of the total number of CL cases were reported from Middle-East countries. Of the total cases in the Region, 82% were reported from Afghanistan, the Islamic Republic of Iran and the Syrian Arab Republic.

Materials and Methods:
Active and passive CL and VL case detection in different parts of Iran.

Results:
At this present time, CL is endemic in 18 out of 31 provinces,143 districts and 1916 foci of Iran. About 70% of CL in Iran is caused by *L.major* and 30% by *L.tropica*. VL is endemic in 30 districts particularly located in south and north-west parts of Iran with 2 million population at risk.

Conclusion:
CL in Iran has different epidemiological aspects with various control strategies.

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Wound Microbiology and Various Approaches to Wound Management

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ARTICLEINFO

Oral-Panel

Key words:
Antibiotics, Essential oil, Microbiology, Nanoparticles, Wound.

ABSTRACT

Introduction:
Burn wound infection is an important type of wound infection that requires special care and treatment because if left unchecked, it can cause serious injury and even results in the patient's death.

Materials and Methods:
In this study, common microorganisms in burn wounds were introduced and different approaches to control and prevent wound infection were investigated.

Results
Different aerobic and anaerobic bacteria exist in burn wound infection including: Staphylococcus aureus, Streptococcus, Enterococcus, Pseudomonas, Acinetobacter, Escherichia coli, Klebsiella, Enterobacter, Serratia and Proteus. Among various ways to prevent and control burn wound infection, correct and rational administration of antibiotic of choice for bacteria in the wound is important. vancomycin, linezolid, tigecycline, daptomycin, quinupristin-dalfopristin, dalbavancin and penicillins are used for Gram positive bacteria; Piperacillin tazobactam, polymyxins, ceftazidime, ciprofloxacin and carbapenems are administrated for gram negative bacteria. Also use of essential oils and nano particles which exert their antimicrobial effects by affecting different sites in the bacterial structure and the use of metabolic pathway. Different Mechanisms are disrupt in penetration in cell wall and cell membrane, decrease pH, coagulation of bacteria cell matters and generating Reactive Oxygen Species (ROS).

Conclusion:
Therefore, choosing the best and the most useful method to prevent and control wound infection is very important

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Cervical Lymphadenopathy

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ARTICLEINFO

Oral-Panel

Key words:
Cervical lymphadenopathy, Lymphadenitis.

ABSTRACT

Introduction:
Palpable lymph nodes are common in cervical region mainly connected with local inflammatory process.The most common causes of childhood cervical lymphadenopathy are infections but there are numerous infectious and non infectious etiology for cervical lymphadenitis. infectious causes are divided four categories Acute/Subacute bilateral cervical lymphadenitis and Acute/Subacute unilateral cervical lymphadenitis.The most causes of acute bilateral are viruses such as Influenza, EBV, CMV, HSV and Adenoviruses. The common cause of bilateral bacterial cervical lymphadenitis is Group A streptococcal pharyngitis.and acute unilateral lymphadenitis is usually caused by S.aureus ,group A streptococcus and in infants streptococcus agalactiae. And anaerobic bacteria are isolated in older children with history of periodontal disease.Sub acute bilateral lymphadenitis such as cat scratch disease or nontuberculous mycobacterial infection are seen and leukemia and lymphoma must be considered .
In children with moderate symptom suggets needle aspiration and emperical antibiotics include coverage for s.aureus and GAS. In severe symptoms recommends antibacterial therapy after drainage of lymph node.Initial evaluation of children with subacute cervical lymphadenitis includes: CBC,ESR,CRP,Hpatic panel,TST or IGRA,Serologic testing for HIV, EBV,CMV and Serology for Toxoplasmosis or Plague if indicated.
If Malignancy is suspected in children,exicional biopsy should occur as early as possible.

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Nutritional Strategy in IBD Patient During Corona Virus Outbreaks

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ARTICLEINFO

Oral-Panel

Key words:
COVID-19, Enteral nutrition, IBD, Nutrition.

ABSTRACT

Introduction:
IBD patients have a potentially higher risk of complications of COVID-19 due to the chronic illness itself, over expression of ACE2 receptors and immunosuppressive therapies. Moreover, the prevalence of malnutrition in IBD populations is about 15% to 80% that is related to impaired appetite, active inflammation and risk of malabsorption. Conversely, isolation restrictions, following unhealthy dietary habits and less physical activity can result in obesity. both of these malnutritional status are association with persistent disease activity. The aim of this article was to review nutritional management of IBD patient during this pandemic.

Materials and Methods:
We investigated all studies related to the IBD and nutrition during COVID-19 breakdown.

Results:
According to the literature, nutritional screening and healthy flexible eating with daily physical activity were advised for all IBD patients. Moreover, Exclusive Enteral Nutrition might be a more suitable alternative to corticosteroids in patient with a flare of disease.
Furthermore, because of the high prevalence of patients with IBD who suffer from IBS, reducing FODMAP diet were advised. Finally, it was reasonable to consider vitamin D and a broad-spectrum multivitamin for patients at risk of deficiency.

Conclusion:
It seemed that more trials are needed for supporting all aspects of nutrition in IBD patients.

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COVID-19 and Anti-inflammatory Nutrition

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ARTICLEINFO

Oral-Panel

Key words:
Anti-inflammatory, COVID-19, Minerals Vitamins.

ABSTRACT

Introduction:
SARS-CoV-2 is an RNA virus which cause multiple organ dysfunction due to uncontrolled acute inflammation and cytokine storm release. In addition, the coexistence of non-communicable chronic diseases (NCDs) with underlying systemic inflammation in COVID-19 patients, may exacerbate the inflammatory pathology and increase the risk for adverse outcomes. For this reason, anti-inflammatory therapies have been considered to decrease the inflammatory response in severe COVID-19 infections. The aim of this study was to review the effect of anti-inflammatory strategy in patient with COVID-19.

Materials and Methods:
We evaluated all studies related to anti-inflammatory nutrition in COVID-19 pandemic.

Results:
Nutritional interventions could be proposed as an effective and safe strategy with anti-inflammatory effect in this situation. Healthy dietary pattern and nutrients which characterized by anti- inflammatory properties potentially benefit or prevent severe infections specially in patients with comorbidities. At a minimum, the achievement recommends daily allowance (RDA) for those nutrients was recommended at this time. Mediterranean diet and several nutraceuticals like Zn, vitamin D, vitamin C, curcumin, cinnamaldehyde, probiotics, selenium, lactoferrin, quercetin had a proven ability of antiviral, antioxidant, anti-inflammatory effects.

Conclusion;
It appeared that further studies are needed to supported the use of specific food supplements as adjuvant therapy for the management of COVID-19 subjects.

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Multi-System Inflammatory Syndrome in Children (MIS-C): Clinical Presentation and Complications

Seyyed Reza Raeeskarami

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ARTICLEINFO

Oral-Panel

Key words:
CDC, Criteria, kawasaki disease,MIS-C, WHO.

ABSTRACT

Introduction:
Multisystem inflammatory syndrome in children (MIS-C) is a new phenomenon reported worldwide with temporal association with covid-19. Patients with MIS-C were noted to have a high frequency of gastrointestinal symptoms including abdominal pain and diarrhea. Cough and respiratory distress were reported in the small counts of patients. Symptoms in MIS-C are overlapping with, but distinct from, Kawasaki disease, including GI symptoms, left ventricular systolic dysfunction , shock, and marked elevated inflammatory biomarkers.
Most patients have involvement of at least four organ systems. The most commonly involved organ systems are: the gastrointestinal, cardiovascular, hematologic, mucocutaneous, and respiratory systems. In CDC case definitions of MIS-C all 4 criteria must be met:age <21 years, clinical presentation consistent with MIS-C, laboratory evidence of inflammation,multisystem involvement, severe illness requiring hospitalization and any of the following:Positive SARS-CoV-2 RT-PCR,positive serology,positive antigen test and COVID-19 exposure within the 4 weeks prior to the onset of symptoms. Patients who meet these criteria and who also fulfill full or partial criteria for Kawasaki disease should be considered to have MIS-C and should be reported. In addition, MIS-C should be considered in any pediatric death with evidence of SARS-CoV-2 infection.

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Observance of Professional Ethics in Interacting with Patients as a Tool to Generalize the Right to Health

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ARTICLEINFO

Oral-Panel

Key words:
Human dignity, Medical ethics, Patient.

ABSTRACT

Introduction:
Health is the greatest human asset. The right to human health is one of the fundamental human rights.Just as no kind of discrimination against human beings on the basis of race, religion, or gender is accepted, ignoring a citizen's fundamental rights such as the right to health, proper treatment, the right to privacy, the right to access essential medicines is another matter. He is considered a human being. Observance of professional ethics in dealing with the patient and maintaining the patient's safety is the most important right of the health system of any country. Creating a culture and educating health professionals about medical ethics in interacting with the patient, respect for the patient's rights, and his safety take precedence over any other action. The Supreme Leader of the Revolution says: "Let us make sure that the patient does not suffer other than the disease."

Materials and Methods:
this research is based on analytical descriptive method

Results:
Paying attention to the dignity and human dignity of the patient and observing professional ethics and respecting them is one of the important factors in the recovery and comfort of patients.

Conclusion:
If the rights of patients and their families are respected by health professionals, it has the advantage of making patients aware of all stages of treatment and ensuring that their hospitalization is fruitful.

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Diagnosis and Treatment of Gram- positive Infections

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ARTICLEINFO

Oral-Panel

Key words:
Antibiotic resistance, Diagnosis, Gram-positive, Infections, Treatment.

ABSTRACT

Introduction:
Aerobic gram passive cocci, especially staphylococcus, enterococcus, and pneumococcus, are important causes of bacterial infections in pediatric and adult. They can be acquired from the community and the hospital. Antimicrobial-resistant, especially among staphylococcus and enterococcus, causes significant health problems.

Materials and Methods:
Methicillin-resistant Staphylococcus, which is an important cause of pediatric infections, may be resistant to many other antibiotics, including vancomycin. Enterococci, especially Enterococcus faecalis and Enterococcus faecium, are associated with bacteremia, device-associated infections, urinary tract infections, and intra-abdominal infections. Some strains of Enterococci are resistant to nearly all available antibiotics. Although not expected as the other two organisms, multidrug antibiotic resistance among pneumococci is crucial because it can cause severe life-threatening infections like meningitis.

Results:
Vancomycin, linezolid, daptomycin, tigecycline, and quinapristin-dalfopristin can be used to treat resistant organisms.

Conclusion:
Herein, we review the current infection management caused by gram-positive cocci and strategies to combat potential resistant gram-positive organisms.

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Critical Thinking a Professional Competency for Safe Care and Control of Nosocomial Infections

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ARTICLEINFO

Oral-Panel

Key words:
Critical thinking, Health care-associated infections, Health-care providers, Infection control.

ABSTRACT

Introduction:
Control of Healthcare-associated Infections is one of the important points of hospital quality improvement and risk management programs. The aim of study was to determine the need to use critical thinking skills for safe care and infection control.

***Materials and Methods*:**
In this narrative study, English studies since 2010 with keyword including critical thinking, Healthcare-associated Infections, infection control, medicine, nursing, health-care provider were assessed. Then, its importance for infection control and safe care was identified.

Results:
The funding reveals that preventive actions can significantly reduce Health care-associated Infections. Health-care providers need to be aware of infection transmission situations and take steps to prevent them. Critical thinking helps health-care providers take control of their own health and patients. Critical thinking is a subjective process involving the logical analysis of information for reasoning, judgment, and clinical and care decision-making.

Conclusion:
The changing complexity and nature of health care work conditions, and the need for safe, and evidence-based care, make critical thinking an essential competence in the training and professional performance of health-care providers. Health-care providers need to be able to solve complex problems in treatment settings, use flexible, adaptive strategies, and personnel initiatives to overcome the complexities of safe care and infection control in hospitals.

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A Review Of Considerations In Pediatric Cardiopulmonary Resuscitation During COVID_19 Pandemic

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ARTICLEINFO

Oral-Panel

Key words:
COVID-19, Coronavirus, Children, Cardiopulmonary Resuscitation.

ABSTRACT

Introduction:
The COVID-19 has forced us to take special precautions in patient care, especially in cardiopulmonary resuscitation.

Materials and Methods:
The basis of care is the protection of the staffs and the patient. A patient with or suspected Covid-19 who needs cardiopulmonary resuscitation (CPR) should be transferred to a negative pressure ventilation room with closed door. Wearing personal protective equipment before entering the resuscitation room is mandatory and a priority, also, the personnel responsible for resuscitation should be as limited as possible and a maximum of three or four people should be responsible for resuscitation. In addition, oxygenation and ventilation strategies must be prioritized with lower aerosolization risk.

Results:
Ensure the endotracheal intubation in fully sedated patient, otherwise coughing can spread the virus.

Conclusion:
All CPR team members have to be updated with guidelines of resuscitation in these high risk patients.

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Revise of the Health System in the Prevention of Social Inequalities

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ARTICLEINFO

Oral-Panel

Key words:
Health service system, Social inequity Universal health coverage

ABSTRACT

Introduction:
Infectious disease control management in the future requires the establishment of safe health centers. The aim of study was to determine the need for review in the health care system.

Materials and Methods:
This narrative study was conducted using international findings and guidelines on the health care system.

Results:
Privatization in the field of health services has affected their ability to coordinate large-scale preventive activities, limiting their capacity to expand health care in critical situations, and undermining public confidence in the health system. The World Health Organization considers Global Health Coverage as a key to ensuring the health and well-being of people of all ages, making it a fundamental goal for all countries to achieve equitable and sustainable health outcomes. Global health coverage requires strengthening the health system among the people.

Conclusion:
According to published statistics, during the outbreak of COVID-19, the rate of providing health and care services to different groups in different age groups has decreased, which was also observed in certain groups such as pregnant mothers and children. Based on this, safe centers can be established by separating the infected centers so that people do not have problems receiving primary care.

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Wart and Immune Deficiency

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ARTICLEINFO

Oral-Panel

Key words:
Wart, Immune deficiency.

ABSTRACT

Introduction:
Human papillomaviruses (HPVs) viruses that infect the keratinocytes in the epithelium of the skin and mucosa, being responsible for cutaneous warts, genital wart, or papillomatosis. Cellular immunity is the most important effector for HPV. An immune deficiency must be suspected in patients where warts are: Generalized, severe, recalcitrant. Immune deficiencies associated with warts can be classified into three categories: first is represented by two diseases, epidermodysplasia verruciformis (EV) and respiratory papillomatosis (RRP), in which the clinical spectrum is strictly restricted to susceptibility to HPV. The second consists of immune deficiencies in which warts represent the main or a very frequent feature of the disease. In this category, patients have manifestations in addition to warts, unlike EV patients. The disease such as WHIM syndrome, DOCK8 deficiency, GATA2 deficient, Netherton syndrome, STK4 or MST1 deficiency, RHOH deficiency, Idiopathic CD4 lymphopenia.The third Category is represented by immune deficiency in which warts have been reported but do not represent a main feature of the disease. The disease such as NEMO, Wiskott-Aldrich syndrome, XSCID, JAK3-SCID, CVID, ataxia-telangiectasia.In addition, some secondary or acquired immune deficiencies may be associated with warts.

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Assessment of the Patient Suspected to Primary Immunodeficiency

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ARTICLEINFO

Oral-Panel

Key words:
Suspected primary immune deficiencies

ABSTRACT

Introduction:
Primary immune deficiencies (PIDs) form a heterogeneous group of inherited disorders, generally caused by specific gene mutations affecting immune system development and function.Descriptions of PIDs date back to more than six decades ago, when DrBruton described X-linked agammaglobulinemia (XLA) in 1952.The most common form of PID is IgA deficiency that is asymptomatic and Common variable immune deficiency (CVID) is also one of the most common symptomatic forms of PID.Diagnostic consideration of PID is of importance, since timely diagnosis and appropriate treatment improve life expectancy and the quality of life of patients dramatically. Immune deficiencies usually manifest as recurrent infections, as well as other clinical manifestations, which include: FTT, evidence of GVHD, adverse reaction to vaccines, malignancies, evidence of autoimmunity, abnormal features. Also clinicians should determine whether patients have a history of risk factors for infection or of symptoms and risk factors for secondary immunodeficiency disorders. Common risk factors for recurrent infections:day-care, school, second-hand smoke, atopy, anatomic abnormalities including ciliary defects, retained foreign body, gastroesophageal reflux.Factors for secondary immunodeficiency disorders are infection, renal failure, or protein losing enteropathy, leukaemia or lymphoma, myeloma, extremes of age, certain drug therapies.

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Treatment and Rational Drug Use in Immunodeficiency Disorders

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ARTICLEINFO

Oral-Panel

Key words:
Immunodefiency, Rational drug use, Treatment.

ABSTRACT

Introduction:
Immunodeficiency disorders usually result from use of a drug or from a long-lasting serious disorder (such as cancer or diabetes) but occasionally are inherited (primary immunodeficiency) Immunodeficiency disorders impair the immune system's ability to defend the body against foreign or abnormal cells that invade or attack it (such as bacteria, viruses, fungi, and cancer cells). With appropriate treatment, many people with an immunodeficiency disorder have a normal life span. However, some require intensive and frequent treatments throughout life. Others, such as those with severe combined immunodeficiency, die during infancy unless they are given a stem cell transplant As a result, unusual bacterial, viral, or fungal infections or lymphomas or other cancers

Treating infections. Antibiotics are given as soon as a fever or another sign of an infection develops and often before surgical and dental procedures, Antiviral drugs are given at the first sign of viral infection . Immune globulin can effectively replace missing antibodies. Strategies for preventing and treating infections depend on the type of immunodeficiency disorder. People who have an immunodeficiency disorder due to a deficiency of antibodies are at risk of bacterial infections.

Vaccines are given if the specific immunodeficiency disorder does not affect antibody production.

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The Importance of Health Literacy in Prevention of Infection Diseases: Systematic Review

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ARTICLEINFO

Oral-Panel

Key words:
Health literacy ,
Infection diseases.

ABSTRACT

Introduction:
to make it least the transmission of infectious diseases is a core function of public health. Therefore, the governments and the healthcare system should work together with other sectors at different levels to develop effective strategies and programs to manage the infection. Various factors are involved in the control of infectious diseases. one of this strategies improve the health literacy. The influence of health literacy on infectious diseases is examined in this article.

Materials and Methods:
Databases were searched in men and women aged 25 to 75 from January 2000 through July 2019. seeking studies reporting on health literacy and infectious diseases, and infection-related behaviors such as vaccination and hand hygiene.

Results:
Studies were found on antibiotic knowledge and use, the adoption of immunizations, such as influenza, viral hepatitis infections and HIV. There was a lack of investigations on areas such as tuberculosis, malaria, hand hygiene, and diarrheal diseases.

Conclusion:
Limited or insufficient health literacy was associated with reduced adoption of protective behaviors such as immunization, and an inadequate understanding of antibiotics, although the relationship was not consistent. Large gaps remain in relation to infectious diseases with a high clinical and societal impact, such as tuberculosis and HIV.

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Surgical Site Infections and Antimicrobial Prophylaxis

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ARTICLEINFO

Oral-Panel

Key words:
Antibiotic prophylaxis, Antimicrobial prophylaxis, Prevention, Risk factors, Surgical site infection.

ABSTRACT

Introduction:
Although advances in surgical techniques have dramatically reduced a patient's risk for developing a surgical site infection (SSI) after a surgical procedure, these outcomes still cause substantial morbidity. A variety of risk factors for the development of SSI exist, including patient-related, procedural-related, and pathogen-related factors. Patient factor, including comorbid illness, colonization with pathogenic bacteria, perioperative hyperglycemia, and elevated body mass index. Procedural factors, including breaks in sterile technique,operating room ventilation, and traffic. Proceduralist factors, including surgical technique, improper application of skin antisepsis, teamwork incoordination, and provider impairment. Key principles in Surgical Site Antimicrobial Prophylaxis includind; 1-Maintain tissue concentration of drug above mean inhibitory concentration of common flora. 2- Provide " right " drug-targets flora at incision site, adequately penetrates incision site, monimal adverse events. 3- Provide " right "dose at the " right " time-dose in the window before incision to allow penetration into tissues, use higher doses for obese patients, redose in prolonged procedures . 4- Provide " right " duration of drug; stop once incision closed. Adverse effects of prophylaxis include allergic reactions , CDAD, the red man syndrome associated with rapid infusions of the antibiotic. Antibiotic use have a critical role in the selection of antibiotic-resistant bacteria. Finally, the importance of SSI prevention, the benefit of prophylactic antibiotics outweigh the risk of this potential side effect, but judicious use including early discontinuationof antibiotics for this purpose should be followed.

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Peritoneal Dialysis Related Peritonitis: Bacterial Peritonitis and its Treatment

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ARTICLEINFO

Oral-Panel

Key words:
Bacterial peritonitis, Etiologies, Peritoneal dialysis, Peritonitis.

ABSTRACT

Introduction:
Peritoneal dialysis is an effective treatment modality for patients with end-stage renal disease. Peritoneal dialysis-related peritonitis remains the major complication and primary challenge to the long-term success of peritoneal dialysis.Prevention of peritonitis and its appropriate management is essential for the long-term success of peritoneal dialysis.The main route for infection is via touch contamination and *Staphylococcus epidermidis* and *Staphylococcus aureus* account for 50% of cases. Other common pathogens include gram negative bacteria. The presence of >100 WBCs/μL with >50% neutrophils on a 2-hour dwell sample usually indicates peritonitis. In the absence of a positive gram stain, empiric therapy should include antibiotics that cover both gram-negative and gram-positive bacteria. For empiric coverage of gram-positive bacteria, recommended drugs are cefazolin or vancomycin. For gram-negative bacteria, initial therapy should include a third-generation cephalosporin (ceftazidime or cefepime) or an aminoglycoside (gentamicin, tobramycin, or amikacin).
Despite the marked reduction in peritonitis over time, peritonitis for the individual patient is problematic. The mortality for an episode of peritonitis is 5% and is a cofactor for mortality in another 16% of affected patients. Prevention of peritonitis and prompt and its appropriate management is essential for the long-term success of peritoneal dialysis in all patients.

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Intravascular Catheter-Related infection Infective Endocarditis

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ARTICLEINFO

Oral-Panel

Key words:
Children, Infective endocarditis, Intravascular catheter.

ABSTRACT

Introduction:
Infective endocarditis (IE), develops because of bacterial, viral, or fungal agents, is an infection of the endocardium. IE often affects the heart valves, it may cause septal defects or mural endocarditis. Risk Factors (Catheter factors) are the site of catheter placement, duration of catheterization, type of catheter material, conditions of insertion, catheter-site care and skill of the catheter inserter. The incidence of CLABSI associated with central lines among patients hospitalized in intensive care units (ICUs) in the United States and Canada decreased from 3.64 to 1.65 infections per 1000 central-line days between 2001 and 2020. Catheter-related bloodstream infections (CRBSIs) occur in association with peripheral intravascular (IV) catheters and central venous catheters (CVCs). CVCs are increasingly used in the inpatient and outpatient setting to provide long-term venous access bloodstream infections associated with such catheters are also known as central line-associated bloodstream infections (CLABSIs). Patients receiving treatment with gentamicin or vancomycin should have blood levels for these drugs checked at least once a Echocardiography. Repeat echocardiogram may be warranted during treatment of IE to assess for changes in vegetations and evaluate valve and myocardial function. Once treatment is completed, repeat evaluation may be necessary to establish a new baseline of valvar and myocardial function for the patient.

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Principles of Environmental Health in the operating Room in the COVID-19 Epidemic

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ARTICLEINFO

Oral-Panel

Key words:
COVID-19, Disinfection, Operating room, Ventilation

ABSTRACT

Introduction:
A new coronavirus (SARS-CoV-2) pandemic is causing a disease called COVID-19. The most common way of transmitting the COVID-19 is through direct contact with the respiratory droplets of infected people: sneezing, coughing, which is transmitted through kissing, talking, and laughing**.** In addition to, contact with contaminated surfaces with droplets can also play a role in transmitting the virus. Aerosol production methods, such as intubation, endoscopy, laparoscopy and etc., may transmit COVID-19. Therefore, all these steps should be done in a well-ventilated room. Environmental and engineering controls are an integral part of infection control, including standards for proper ventilation according to specific areas in health care centers, design of compatible structures, spatial separation, and cleaning of the environment. In COVID-19, any surgical procedure may be dangerous for operating room staff and patients. Therefore, in addition to the staff having to follow standard precautions and the proper use of personal protective equipment, precautions including engineering controls, washing and disinfection of surfaces need to be considered to reduce exposure to infectious materials. This article observes the principles environmental health engineering regarding ventilation, cleaning and disinfection of surfaces, equipment and waste in the operating room during the COVID-19 epidemic.

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Antimicrobial Prophylaxis for Prevention of Surgical Site Infections

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ARTICLEINFO

Oral-Panel

Key words:
Aantimicrobial prophylaxis, Prevention, Surgical site infections.

ABSTRACT

Introduction:
Department of Clinical Pharmacy, School of Pharmacy, Shiraz University of Medical Sciences, Shiraz, Iran Surgical site infections (SSIs) are a common cause of health care-associated infection. SSIs is defined as infection related to an operative procedure that occurs at or near the surgical incision within 30 or 90 days of the procedure, depending on the type of procedure performed. SSIs are often localized to the incision site but can also extend into deeper adjacent structures. Among surgical patients, SSIs account for 38 percent of nosocomial infections. It is estimated that SSIs develop in 2 to 5 percent of the more than 30 million patients undergoing surgical procedures each year. According to a report, the incidence of health care-associated infections in Iran is 1.18, with 14.6% SSIs. The predominant organisms causing SSIs after clean procedures are skin flora, including streptococcal species, S. aureus, and coagulase-negative staphylococci. The goal of antimicrobial prophylaxis is to prevent SSI by reducing the burden of microorganisms at the surgical site during the operative procedure. Preoperative antibiotics are warranted if there is high risk of infection or if there is high risk of deleterious outcomes should infection develop at the surgical site. Antimicrobial selection for SSI prophylaxis is based on cost, safety, pharmacokinetic profile, and antimicrobial activity. Cefazolin is a drug of choice for many procedures. Antimicrobial therapy should be administered within 60 minutes before surgical incision to ensure adequate drug tissue levels at the time of initial incision. To ensure adequate antimicrobial serum and tissue concentrations, repeat intraoperative dosing is warranted for procedures that exceed two half-lives of the drug or for procedures in which there is excessive blood loss. Generally, repeat antimicrobial dosing following wound closure is not necessary and may increase antimicrobial resistance.

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Surgical Hand Scrub Standard Methods: A Concise and Simplified Look

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ARTICLEINFO

Oral-Panel

Key words:
Hand scrub, Hand hygiene, Surgery, Standard methods.

ABSTRACT

Introduction:
Surgical hand scrub is one of the most crucial issues in prevention of surgical site infections. Despite years of performing scrubs in operating rooms, there is significant inconsistency in doing it. Surgical hand scrub is aimed to: reduction of transient microorganisms and debris from the nails, hands, and forearms, decreasing the resident microbial flora and prevention of rapid re- growth of microorganisms. All sterile team members should perform the hand and arm scrub before entering the surgical suite .Using sterile gloves does not make surgical hand washing needless because 18% (range: 5–82%) of gloves have tiny holes after surgery that mostly go unnoticed by the surgeon. 35% of gloves would have puncture after two hours of surgery. Surgical hand scrub procedure are done with two main methods. One method is the stroke method, in which a certain number of strokes are designated for each finger, palm, back of hand, and arm. Another method is the timed scrub that should last from three to five minutes. Surgical hand antisepsis using an alcohol-based hand rub require 3 minutes, following the reference method outlined I EN 12791 recently 90 seconds of rub have been reported to be equal to a 3-minute rub with a mixture of iso- and n-propanol and mecetronium etilsulfate. Several of the available gels for hygienic hand rub do not meet the European standard EN 1500. So ,Alcohol-based hand gels should not be used unless they meet EN 12791 or an equivalent standard, e.g. FDA TFM 1994. Briefly most commercially available products recommend a 3-minute exposure, although the application time may be longer for some formulations, but can be shortened to 1.5 minutes for a few of them. Lowering the rub time to less than 90 seconds significantly lower bacterial killing) and rinse the hands with an 'aseptic liquid'. Association of perioperative Registered Nurses, Inc. (AORN) recommends typical scrub procedure with povidone-iodine require the use of a scrub brush and two applications of five minutes each, whereas the typical procedure for chlorhexidine require a three-minute scrub followed by a three-minute wash. (According to manufacturer's labeling).

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Professional Ethics and Patient Care

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ARTICLEINFO

Oral-Panel

Key words:
Iran, Professional ethics, Patient care.

ABSTRACT

Introduction:
Medical creativity in the field of Iranian society after the Islamic Revolution compared to the previous era and according to what is in the world today has fundamental and fundamental differences. The discussion of new jurisprudential-medical issues in the field of medical ethics has introduced a new approach that has created challenges in Western and even Islamic societies and new solutions have been found. Topics such as philosophy of ethics in Islam, ethics in medical research, Professional ethics and physician responsibility, medical ethics and technology, ethics in medical education, on the one hand and on the other hand, issues with the Islamic view in medicine such as the position of man before birth, the position of the human body, euthanasia and the end of human life, abortion therapy , Description of Muslim corpse, organ transplantation and brain death, new methods of induction of pregnancy, embryo donation to infertile couples, stem cells and the subject of human cloning, etc. Medical ethics and the Islamic Penal Code and diat in medicine, etc. have been discussed. The executive by-laws of these laws in the government and the issuance of various by-laws in the field of medical ethics, patient rights, etc. are very progressive and groundbreaking measures in the medicine of the Islamic Republic and can be presented to other countries and medical associations of the world.

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Medical Education in COVID-19 Pandemic

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ARTICLEINFO

Oral-Panel

Key words:
COVID-19, Medical education, Learning and instructional design

ABSTRACT

Introduction:
The World Health Organization declared "coronavirus disease 2019" a pandemic on March 12, 2020 which has infected more than 26 million people globally, with over one million death. Long-term impact of this pandemic is still unknown. Obviously, both Covid-19 and the particular measures to contain it are having an enormous impact on medical education. Globally, COVID-19 pandemic has driven medical education towards more "online-education" approaches: now, medical educators and learners try to follow some tips to experience more effective and friendly education. In pandemic educational environment, medical education faces different challenges: Firstly, online education should not decrease high standards of medical education. Medical educators should discover opportunities offered by COVID-19 to improve students' educational experience. Secondly, most educational and psychological theories on learning and instructional design have been developed to "normal circumstances". However, with the current abnormal environment, these theories need to be revised. Thirdly, medical education must consider diversity of students' educational experience; they have their own strengths and weaknesses. These differences have always been a challenge in medical education. Obviously, individual differences need customized instructing, teaching, and learning. Furthermore, a pandemic brings more additional challenges. Undoubtedly, we should still encourages professional competence and resilience in such uncertain times.

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A Glance at Bacterial Contamination of Blood Components

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ARTICLEINFO

Oral-Panel

Key words:
Blood transfusion, Blood components, Bacterial infections.

ABSTRACT

Introduction:
Bacterial infections are one of the most important clinical complications of prescribing blood products. The incidence of blood-borne bacterial infections and their products, especially platelet products, is much higher than other blood-borne infections. It is estimated that at least one unit out of every 2,000 units of platelets contains bacterial contamination, while the transmission of HIV and HCV virus is estimated to be one in 2 million units per injection. Recently, some studies in Japan have shown that 0.2% of blood products are contaminated. In one study, the most common isolated organism was Staphylococcus epidermis. Bacterial contamination is more common in autologous blood products (3.6%). They were kept for four days. The risk of clinical TTBI was lower depending on the type of blood product consumed and the underlying pathogen of the blood recipient. In general, platelet injections have a higher risk of contamination because the product is stored at room temperature. The incidence of severe septic attacks following blood transfusions is estimated to be one per 50,000 units of injected platelets and one per 500,000 units of injected red blood cells. Infectious reactions associated with injection of erythrocyte units are severe and are associated with 70% mortality. Storage of the product at a temperature above 38°C and its contamination can show symptoms such as chills, hypotension, nausea and vomiting, shortness of breath, diarrhea, septic shock and coagulation of dic intracranial stress in the recipient. Acute reactions due to transfusion of blood contaminated with gram-negative organisms, especially *Yersinia enterocolitica*, are caused by endotoxins in blood products. This releases large amounts of cytokines such as TNF, which is an important factor in pathogenicity and shock. These complications are higher in units that have been stored for more than 21 days.

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COVID-19 Pandemic: The Greatest Challenge is choosing the Kind of Treatment

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ARTICLEINFO

Oral-Panel

Key words:
COVID-19, Favipiravir, Remdesivir, Treatment

ABSTRACT

Introduction:
Coronaviruses are important human and animal pathogens. At the end of 2019, a novel coronavirus was identified as the cause of a cluster of pneumonia and respiratory failure cases in Wuhan. The complex pathophysiology, extrapulmonary and pulmonary disease, and immune mediated effects such as cytokine storm syndrome (CSS), make medical management more challenging than many viral illnesses. CSS is a severe complication of inflammatory immune diseases or treatment of malignancies; it may also appear during the progression of COVID-19. There is still no definitive treatment for this virus, medications used against SARS-CoV-2 are mainly based on their effectiveness on earlier strains of coronavirus, SARS-CoV and MERS-CoV. Two main categories of pharmaceutical therapeutics are showing promise: those with antiviral activity directly addressing infection and those that counteract the inflammatory cytokine storm induced by severe disease. Preliminary results suggest that other approaches such as convalescent plasma therapy and may have some efficacy. RNA-dependent RNA polymerase inhibitors (favipiravir and remdesivir) and steroids especially dexamethasone showed promising effects. Dexamethasone was recommended for severely ill patients who are on supplemental oxygen or ventilatory support and also remdesivir for hospitalized patients with severe COVID-19.

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Chest CT Features of Coronavirus Disease 2019 (COVID-19) Pneumonia: From Diagnosis to Follow-Up

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ARTICLEINFO

Oral-Panel

Key words:
COVID-19, Chest CT, Diagnosis.

ABSTRACT

Introduction:
Coronaviruses are important human and animal pathogens. At the end of 2019, a novel coronavirus was identified as the cause of a cluster of pneumonia and respiratory failure cases in Wuhan. An early diagnosis of COVID-19 is crucial for disease treatment and control of the disease spread. Real-time reverse-transcription polymerase chain reaction (RT-PCR) demonstrated a low sensibility, therefore chest computed tomography (CT) plays a pivotal role not only in the early detection and diagnosis, especially for false negative RT-PCR tests, but also in monitoring the clinical course and in evaluating the disease severity. The hallmark of COVID-19 is the bilateral presence of patchy ground glass opacities (GGOs) that may coalesce into dense, consolidative lesions, with a predominantly peripheral distribution under the pleura and along the bronchovascular bundles. The progressive stage of COVID-19 pneumonia is characterized by a more extensive lung involvement and more varied imaging features. GG opacities increase in density and can appear diffuse or with a crazy paving pattern on HRCT. Consolidations can progressively develop in the areas of GG or increase in size and number respect to previous HRCT scans. During the disease recovery, the lesions are gradually absorbed over a period of two weeks, leading to the formation of fibrotic stripes. The awareness of relationship between imaging findings and underlying pathogenesis helps to increase the level of confidence in recognizing possible complications and differential diagnosis.

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Tourism and COVID-19

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ARTICLEINFO

Oral-Panel

Key words:
COVID-19, Pandemics, Tourism.

ABSTRACT

Introduction:
The outbreak of infectious diseases imposes a major effect on tourism demand and the economies of destinations. Infectious diseases documented in the tourism literature include avian flu, swine flu (H1N1), severe acute respiratory syndrome (SARS), Lyme disease, and foot-and-mouth disease. A new and ongoing infectious disease outbreak, COVID-19, was declared a pandemic by the World Health Organization on March 11, 2020. As a result, many countries and regions have introduced travel restrictions, which are exerting a severe negative economic influence on the tourism sector worldwide. Based on the estimations of the United Nations World Tourism Organization (UNWTO) in April 2020, global tourism could experience a 20–30% decline in global international tourist arrivals this year, leading to a US$30–50 billion decrease in tourist spending. This underscores the fact that tourism is unfortunately one of the industry sectors hardest hit by the COVID-19 pandemic (UNWTO, 2020). The negative effects on the tourism sector and its destinations are due not only to travel restrictions but also to potential tourists' reduced willingness to travel during epidemics or pandemics. Understandably, the danger of catching an infectious disease has become a major health concern, which influences tourists' willingness to travel and ultimately decreases their intention to visit places that may be hazardous to their health.

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Which COVID-19 Patients Should be Hospitalized?

Amir Masoud Hashemian

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ARTICLEINFO

Oral-Panel

Key words:
Admission, COVID-19, Emergency medicine.

ABSTRACT

Introduction:
The signs and symptoms of COVID-19 are different, and most people come to emergency department with following experience and we should know what indications for hospitalization is. Fever or chills/Cough/Shortness of breath or difficulty breathing/Fatigue/Myalgia/Headache/Anosmia/Sore throat/Congestion or runny nose/Nausea or vomiting/Diarrhea. Fever, cough, and shortness of breath are more commonly reported among people who are hospitalized. Illness Severity is important for Decision for hospitalization.it is mild, severe to critical. Older adult and medical condition(cancer, CKD, COPD, Heart failure, obesity, diabet2) and some lab tests (D-dimer, LFT, Ferritin, CRP, LDH, leymphopenia)are important for decision for admission, but final decision in the inpatient or outpatient setting should be made on a case-by-case basis.

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Traveler's Diarrhea: A Clinical Review

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ARTICLEINFO

Oral-Panel

Key words:
Antibiotic therapy, Diarrhea, Traveler.

ABSTRACT

Introduction:
Travelers' diarrhea is the most common travel-related malady. It affects millions of international travelers to developing countries annually and can significantly disrupt travel plans. To provide an update on the evaluation, diagnosis, treatment, and prevention of traveler's diarrhea.

Materials and Methods:
A PubMed search was completed in Clinical Queries using the key term "traveler's diarrhea".

Results:
Between 10% and 40% of travelers develop diarrhea. The attack rate is highest for travelers from a developed country. TD is defined as the passage of 3 or more unformed stools per day with 1 or more associated enteric symptom. Travelers' diarrhea is usually acquired through ingestion of food and water contaminated by feces. Most cases are due to a bac-terial pathogen, commonly, Escherichia coli**.** Dehydration is the most common complication. Pretravel education on hygiene and on the safe selection of food items is important in minimizing episodes. For severe travelers' diarrhea, antibiotics such as azithromycin, fluoroquinolones, and rifaximin should be used**.**

Conclusion:
Although travelers' diarrhea is usually self-limited**.** Use of an antimotility agent and antimicrobial therapy reduces the duration and severity of diarrhea. Early self-treatment of TD with antibiotic therapy has been shown to be effective at reducing the duration of symptoms.

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Travel Related Infections

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ARTICLEINFO

Oral-Panel

Key words:
Control measures, Infections, Travel.

ABSTRACT

Introduction:
Travel Related Infections is the most important health issue globally. The magnitude of global travel has been increased by 50% over the past decade and 983 million tourists have been traveled in 2011. Travelers can harbor infectious agents and initiate a new communicable disease outbreak. The symptoms of travel related infections vary and may include diarrhea, rash, fever, respiratory infection and chronic cough. The common travel related illnesses include: diarrheal diseases, malaria, Influenza, Covid-19, leishmaniosis, meningococcal meningitis, measles, poliomyelitis, schistosomiasis, trypanosomiasis, hepatitis A, dengue fever, chikungunya, parasitic infections, tuberculosis, typhoid fever, yellow fever, Japanese encephalitis, leptospirosis, rabies, brucellosis and HIV/AIDS. The most common travel related infection is traveler's diarrhea. Immunization of travelers with recommended vaccines, appropriate prophylaxis, food and water precautions, vector and animal precautions, blood borne, airborne and STD precautions are necessary to control of travel related infections. Early diagnosis of infections among travelers can prevent the infectious agents spreading during communicable disease epidemics and pandemics. Travel notices and announcements, control measure advices, and treatment strategies for compromised travelers can help facilitate safe travel for travelers to endemic areas. Finally, we encourage travelers to endemic areas to consult a travel medicine specialist at least one month prior to departure.

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International Travel Challenges

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ARTICLEINFO

Oral-Panel

Key words:
Challenges, International, Travel.

ABSTRACT

Introduction:
The number of people travelling internationally is increasing every year. According to statistics from the World Tourism Organization (UNWTO), international tourist arrivals in the year 2008 reached 922 million. International tourism receipts rose to US$ 944 billion (approximately 642 billion euros) in 2008. International arrivals are expected to reach 1 billion by 2010 and 1.6 billion by 2020. In 2008, more than half of all international arrivals were motivated by leisure, recreation and holidaysl; a total of 467 million. Business travel accounted for some 15% of arrivals and travel for other purposes (visiting friends and relatives, religious reasons/pilgrimage, health treatment, etc.). There are some challenges: scattering of pilgrims in different hotels, communication is a problem and translator is needed, control of pilgrims is not easy in long term, emotional problems after two weeks of leaving, underlying diseases, supply of medicine and commute limitation (depression, anxiety, aggression, etc.), some of them dislike meal that serve in hotel, commuting without control to buy something (e.g. cigarette, food, medicine, etc.) and cancelling flights have financial problems for them.

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Immunization for Travelers

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ARTICLEINFO

Oral-Panel

Key words:
Immunizations, International, Prophylaxis, Traveler.

ABSTRACT

Introduction:
International travel is undertaken by large, and ever increasing, numbers of people for professional, social, recreational and humanitarian purposes. More people travel greater distances and at greater speed than ever before, and this upward trend looks set to continue. Travellers are thus exposed to a variety of health risks in unfamiliar environments. Most such risks, however, can be minimized by suitable precautions taken before, during and after travel. The epidemiology of infectious diseases in the destination country is of importance to travellers. Travellers and travel medicine practitioners should be aware of the occurrence of these diseases in the destination countries. Unforeseen natural or man-made disasters may occur; outbreaks of known or newly emerging infectious diseases are often unpredictable. Vaccination is a highly effective method of preventing certain infectious diseases. For the individual, and for society in terms of public health, prevention is better and more cost-effective than cure. Vaccines are generally very safe and serious adverse reactions are uncommon. Routine immunization programmes protect most of the world's children from a number of infectious diseases that previously claimed millions of lives each year. For travellers, vaccination offers the possibility of avoiding a number of dangerous diseases that may be encountered abroad. Immunized travellers will also be less likely to contaminate other travellers or the local population with a number of potentially serious diseases. Before departure, travelers should be advised about the risk of disease in the country or countries they plan to visit and the steps to be taken to prevent illness. The risk to a traveller of acquiring a disease depends on the local prevalence of that disease and on several other factors such as: age, immunization status and current state of health, travel itinerary, duration and style of travel. The traveller's individual risk assessment allows a health care professional to determine the need for immunizations and/or preventive medication (prophylaxis) and provide advice on precautions for avoiding disease. There is no single schedule for the administration of immunizing agents to all travellers. Each schedule must be personalized and tailored to the individual traveller's immunization history, the countries to be visited, the type and duration of travel, and the amount of time available before departure.

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Video-Assisted Thoracic Surgery (VATS) for Pleural Empyemas in Children

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ARTICLEINFO

Oral-Panel

Key words:
Children, Pleural empyema, Thoracoscopy.

ABSTRACT

Introduction:
Pleural effusions and empyema are known complications of bacterial pneumonia. Effusions occur in at least 40% of bacterial pneumonias, with up to 60%of effusions resulting in the formation of empyema in all age groups. With the advent of video-assisted thoracic surgery (VATS), pleural debridement, or "limited decortication," has become more common.

Materials and Methods:
Fourteen children with median age 4 years (2-14 year) underwent VATS surgery for postpneumonic empyema between 2009 until 2014 in our unit were studied. All patients received fibrinolytic after surgery for 3days.

Results:
The median time from onset of symptoms to admission in a pediatric unit was 8 days (range, 2 to 30 days).Eleven children had a chest drain before surgical admission. Empyema was recognized by Chest-X Ray and plural ultrasound. Except one patients CT scan was done for all cases. One patient, who was referred late (30 days after diagnosis) had lung abscesses. Empyema was bilateral in one of them, and VATS procedure performed in both sides with 5 days interval.
3 cases did not respond to thoracoscopic decortication and underwent open procedures. At follow-up, all children were doing well and had satisfactory radiographs. The median postoperative hospital stay was 7 days (5-14days).

Conclusion:
VATS provides rapid resolution of symptoms with a short hospital stay and minimal surgical scars. VATS is an excellent option for management of empyema in children.

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Treatment of Septic Shock in Emergency Department

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ARTICLEINFO

Oral-Panel

Key words:
Emergency department, Septic shock, Treatment.

ABSTRACT

Introduction:
Septic shock is a significant source of morbidity and mortality in children. Adhering to evidence-based guidelines for treatment for children with septic shock can lead to better outcomes. Initiation of treatment should begin promptly after recognition of shock in the emergency department. Resuscitation should be initiated within 15 minutes of confirming severe sepsis or septic shock. In contrast to previous guidelines, fluid therapy is difference in healthcare systems with or without availability of intensive care units. Also a previous recommendation to target perfusion pressure (MAP minus central venous pressure [CVP]) lacks supporting data. Prioritizing CVP measurement is also impractical during early resuscitation (such as in most pediatric emergency departments); CVP also provides an unreliable assessment of left ventricular preload.

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Pulmonary Mucormycosis in a Child with Diabetes Mellitus Type 1

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ARTICLEINFO

Oral-Panel

Key words:
Diabetes, Mucormycosis, Pulmonary.

ABSTRACT

Introduction:
Mucormycosis is a life threatening condition which can be presented in diabetes mellitus. Although, rhino-orbito-cerebral form is the most common; other types may also be developed. We report a child with diabetes mellitus type 1 who had pulmonary mucormycosis. He was an eleven- year- old boy with dyspnea, polyuria, and polydipsia who developed diabetes mellitus type 1 since 2 years ago. Due to the sign of persistent cough, a chest x-ray and a HRCT scan were done and a pulmonary lesion was detected. The lesion was surgically resected and appropriate antifungal therapy administrated. Mucormycosis is a fatal complication of diabetes mellitus. Therefore, any diabetic patient with any presentation of respiratory symptoms such as cough, or any cutaneous lesion should be examined carefully for mucormycosis and prompt treatment must began.

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COVID-19 associated Invasive Aspergillosis: A Review Study and Recommendations for Diagnostic Approaches

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ARTICLEINFO

Oral-Panel

Key words:
COVID-19, Invasive aspergillosis, Invasive fungal infections, SARS-CoV-2

ABSTRACT

Introduction:
Coronavirus Disease 2019 (COVID-19) is an emerging viral disease caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). Bacterial or fungal super-infections of the lung may cause complications in clinical manifestations, treatment, and increase the mortality rate. In our presentation, we will review previous studies on invasive aspergillosis (IA) in patients with COVID-19 across the world and a brief overview on our obtained data from COVID 19 patients with IA in Iran as well.

Materials and Methods:
Electronic databases, including PubMed, Google Scholar, and Web of Science were searched using the following keywords: COVID-19, SARS-CoV-2, invasive aspergillosis, and invasive fungal infections to review of IA in COVID 19 patients. We also evaluated the COVID 19 patients for IA by culture and non-culture based mycological diagnostic approaches from different ICU center of Mazandaran province.

Results:
Indeed, reports about IPA in severe COVID-19 have started to emerge reporting prevalence of aspergillosis-COVID-19 super-infections in 26.3%-33% among patients presented with ARDS, and therefore within the range of what observed for severe influenza. Patients with COVID-19 who developed severe pneumonia were found with considerably higher rates of viral, bacterial, and fungal co-infections than those with mild pneumonia. The observed finding in our study was also in range of previous reports from different countries.

Conclusion:
While the main focus of physicians is on bacterial super-infection control in COVID-19, ignoring life threatening fungal infections may increase the mortality rate. Therefore, we profoundly recommend early diagnosis of invasive fungal infections in COVID-19 patients.

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Recommendations for anesthesia in patients suspected of COVID-19 Coronavirus infection

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ARTICLEINFO

Oral-Panel

Key words:
Anesthesia, COVID-19, Critical care

ABSTRACT

Introduction:
When managing patients with confirmed or suspected COVID-19 infection, it is of utmost importance to protect health care workers from infection. All staff must identify and review the in-hospital procedural protocols, and plan for patient transfer, anesthesia work environment, and anesthesia methods. Do not allow patients to stay in the holding area for pre-opevaluation. Endotracheal intubation, tube exchange, and extubation are high-risk procedures that can expose healthcare workers to respiratory droplets of the virus. Preoxygenation for 5 minutes with 100% oxygen should be performed. If manual ventilation is required, a small tidal volume may be considered, or a supraglottic airway may be inserted to provide ventilation instead of manual ventilation using a facemask. Rapid sequence induction should be performed to limit procedures such as manual ventilation. Assign the most experienced anesthesia professionals to practitioners performing endotracheal intubations. After intubation, a high-efficiency hydrophobic filter must be applied between the facemask and the breathing circuit, or between the facemask and the reservoir bag. Used laryngoscopes and all used airway equipment should be sealed in double zip-locked plastic bags as soon as the endotracheal intubation is complete, to prevent further contamination of the surroundings.

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Peritonitis and Exit-Site Infection

Mohammad Esmaeili

Mashhad University of Medical Sciences.

ARTICLEINFO

Oral-Panel

Key words:
Diagnosis, Peritoneal dialysis, Peritonitis.

ABSTRACT

Introduction:
Peritonitis remains the Achilles' heel of peritoneal dialysis (PD). Peritonitis is a "contributing factor" to 16% of deaths on PD. Furthermore, it is the most common cause of treatment failure, accounting for nearly 30% of the cases. Many centers now report a peritonitis rate of 0.2 to 0.6 episodes per patient-year at risk, or 1 episode per 20–60 patient-months of PD. Peritonitis rates with APD and CAPD are not generally different. There are five pathways of infection: intraluminal, periluminal, bowel source, hematogenous and transvaginal. Using appropriate culture techniques, an organism can be isolated from the peritoneal fluid in over 90% of cases in which symptoms and signs of peritonitis and an elevated peritoneal fluid neutrophil count are present. The responsible pathogen is usually a bacterium, but fungal peritonitis occurs occasionally. For diagnosis, at least two of the following three findings should be present: (a) symptoms and signs of peritoneal inflammation, (b) cloudy peritoneal fluid with an elevated peritoneal fluid cell count (>100/mcL) due predominantly (>50%) to neutrophils, and (c) demonstration of bacteria in the peritoneal effluent by Gram stain or culture. Peritonitis is usually associated with an increase in the absolute number and percentage of neutrophils in the peritoneal fluid. On some occasions, a high peritoneal fluid cell count causing cloudy fluid will be present owing to an increase in the number of peritoneal fluid monocytes or eosinophils. Most such cases are not associated with peritonitis and do not require antimicrobial treatment.

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Surgical Issues for Central Venous Catheters (CVCs) in End-Stage Kidney Disease

Marjan Joudi

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ARTICLEINFO

Oral-Panel

Key words:
Central venous catheter, Complications, Management.

ABSTRACT

Introduction:
Ideally, patients with end-stage kidney disease would begin hemodialysis with a mature, functional arteriovenous access. However, in certain subgroups of patients, central venous catheters (CVCs) are unavoidable. Even for patients who ultimately use an arteriovenous fistula (AVF) or arteriovenous graft (AVG) for long-term dialysis, the significant majority are exposed to CVCs and their associated risks at some point in their lives. CVC complications may be broadly categorized as infectious or non-infectious. Infectious complications include catheter-related bloodstream infection (CRBSI) and tunnel or exit site infections. Non-infectious complications include mechanical issues (e.g., malpositioned or kinked catheter), central vein stenosis, or thrombosis. In this post, we will explore some common CVC-related complications and how to manage them. General bedside management for non-infectious catheter complications includes repositioning the patient, forceful flushing of saline through the catheter, tPA dwell prior to dialysis, or obtaining a chest x-ray to rule out catheter kinks or malpositioning. If conservative measures fail to improve catheter function, the patient should quickly be referred to an interventional radiologist or nephrologist for further evaluation.

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Fungal Peritonitis in Peritoneal Dialysis

Ashraf Tavanaei Sani

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ARTICLEINFO

Oral-Panel

Key words:
Management, Peritonitis fungi.

ABSTRACT

Introduction:
Infections of the peritoneal space are a common complication of peritoneal dialysis. Among patients undergoing peritoneal dialysis, peritonitis is more commonly caused by bacteria than fungi. However, peritonitis caused by fungi carries a higher morbidity and mortality than bacterial infections. Extraperitoneal spread of infection is unusual, and mortality is usually related to underlying conditions. Infections of the peritoneal space are usually caused by staphylococcal species. By comparison, fungi are responsible for 2 to 13 percent of such cases. Most fungal peritoneal dialysis-associated infections are due to yeasts (Candida species, especially C. albicans and C. parapsilosis). Assorted molds (Aspergillus, Mucormycosis) and, such as species of, Fusarium, Rhodotorula, and dematiaceous molds, are occasionally observed. Culture diagnosis is potentially more accurate than diagnosis by histologic features, but many smaller laboratories encounter difficulties in isolating and identifying fungi. Detection of fungal DNA by polymerase chain reaction (PCR). It is important for all infectious disease specialists to understand the distinction between yeasts and molds. Candida peritonitis: is a complication of peritoneal dialysis, GI surgery, abdominal trauma, perforation of an abdominal viscus, and organ transplantation. The peritoneal process usually remains localized to the abdomen; acquiring the Peritonitis caused by chronic ambulatory peritoneal dialysis, dissemination is distinctly uncommon. Candida recovered from an existing drain does not necessarily indicate peritonitis. Drains may become colonized. Candida from “freshly placed” drains usually requires treatment. Infected peritoneal dialysis catheters must be removed. An echinocandin (caspofungin) or (azol) fluconazole: 400–800 (6–12 mg/kg) daily or voriconazole: 6 mg/kg q12h IV or PO, then 4 mg/kg q12h.

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Rational Treatment in Immunodeficiency

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ARTICLEINFO

Oral-Panel

Key words:
Antibiotics, Immunodeficiency, Treatment, Immune globulin, stem cell transplantation.

ABSTRACT

Introduction:
Immunodeficiency disorders impair the immune system's ability to defend the body against foreign or abnormal cells that invade or attack it (such as bacteria, viruses, fungi, and cancer cells). As a result, unusual bacterial, viral, or fungal infections or lymphomas or other cancers may develop. Another problem is that up to 25% of people who have an immunodeficiency disorder also have an autoimmune disorder. Treatment of immunodeficiency disorders usually involves preventing infections, treating infections when they occur, and replacing parts of the immune system that are missing when possible. With appropriate treatment, many people with an immunodeficiency disorder have a normal life span. However, some require intensive and frequent treatments throughout life. Others, such as those with severe combined immunodeficiency, die during infancy unless they receive a stem cell transplant. Strategies for preventing and treating infections depend on the type of immunodeficiency disorder. For example, people who have an immunodeficiency disorder due to a deficiency of antibodies are at risk of bacterial infections. The following can help reduce the risk: Vaccines are given if the specific immunodeficiency disorder does not affect antibody production. Antibiotics are given as soon as a fever or another sign of an infection develops and often before surgical and dental procedures. Immune globulin can effectively replace missing antibodies (immunoglobulins) in people with an immunodeficiency that affects antibody production by B cells. Stem cell transplantation for selected immunodeficiency cases.

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Peri-Operative Recommendations to Prevent SSI

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ARTICLEINFO

Oral-Panel

Key words:
Infection, Prevention, Prophylaxis, Surgery.

ABSTRACT

Introduction:
The main recommendations for pre-operative period to reduce the rate of surgical site infection (SSI) are listed as below. It is good clinical practice for patients to bathe or shower the day before, or on the day of surgery. The panel suggests that either a plain or an antimicrobial soap may be used for this purpose. The panel recommends that either in patients undergoing any surgical procedure, hair should not be removed or, if necessary, it should be removed only with a clipper. Shaving is strongly discouraged at all times, whether preoperatively or in the operating room (OR). Consider nasal mupirocin in combination with a chlorhexidine body wash before procedures in which Staphylococcus aureus is a likely cause of a surgical site infection. Preoperative oral antibiotics combined with mechanical bowel preparation (MBP) should be used to reduce the risk of SSI in adult patients undergoing elective colorectal surgery. Do not use antibiotic prophylaxis routinely for clean non-prosthetic uncomplicated surgery. The panel recommends the administration of SAP within 120 minutes before incision, while considering the half-life of the antibiotic. The panel recommends alcohol-based antiseptic solutions based on CHG for surgical site skin preparation in patients undergoing surgical procedures. All staff should wear specific non-sterile theatre wear in all areas where operations are undertaken but they should keep their movements in and out of the operating area to a minimum. Oral or enteral multiple nutrient-enhanced nutritional formulas are suggested prior to surgery. There is no evidence to support this as a preventive method for SSI. Perioperative oxygenation, maintaining normal body temperature, intensive perioperative blood glucose control and standard strile drapes and gowns and gloves are also suggested to reduce SSI rate.

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Preventive Effect of Infection by Breastfeeding and KMC

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ARTICLEINFO

Oral-Panel

Key words:
Breastfeeding, Infection, KMC, Prevention.

ABSTRACT

Introduction:
Breastfeeding protects neonates, infants and children against morbidity and death. The protective effect is particularly strong against infectious disease, due to the direct transfer of antibodies as well as anti-infective factors and long- lasting transfer of immunological competence and memory. Breastfeeding has both short and long-term benefits for the mother and her infant. To benefit from the protective factors in breast milk, every effort should be made to support and enable early and immediate initiation of breastfeeding. The neonate has an immature immune system and colostrum, a powerful immune booster, protects infants from infections by means of bioactive factors and secretory IgA antibodies. Breast milk with its abundant source of immunoglobulins, lactoferrin, lysozyme and cytokines play an important role in absorbing and engulfing harmful micro- organisms and targeting specific bacteria and providing protection by regulating the immune response. Human milk oligosaccharides, abundant in human milk, shape the microbiome, provide probiotics and modulate the developing immune system also displaying anti- adhesive effects for bacterial antigens. All the above are compelling reasons for every infant to receive only breast milk and preferably their own mother's milk. The best way to promote successful breastfeeding is to ensure that the mother- infant dyad is kept together and skin- to – skin contact is supported and encouraged. Skin to skin is the safest and best transition for mothers and their infants to a new life together.

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The role of Clinical microbiology laboratory in COVID-19 pandemic

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ARTICLEINFO

Oral-Panel

Key words:
COVID-19 pandemic, Clinical microbiology, Laboratory.

ABSTRACT

Introduction:
The severe acute respiratory syndrome CoV-2 (SARS-CoV-2) infection emerged in China in late 2019, leads to an ongoing pandemic in the world and it has posed a threat to global health. Microbiology laboratories have a crucial role in combating coronavirus disease 2019 (COVID-19). The roles of clinical microbiology laboratories are: Participation in surveillance for the early detection of a novel pathogen, the characterization of the novel pathogen including whole-genome sequencing for surveillance of SARS-CoV 2, developing appropriate diagnostic tests for the rapid and accurate diagnosis of infection caused by the novel pathogen, performing the developed diagnostic test accurately and safely in the clinical laboratories, surveillance of developing significant mutations in novel pathogen over time leading to change in disease behavior, collaboration with the pharmaceutical industry for developing effective medicines for combating the novel pathogen, collaboration with the pharmaceutical industry for developing effective vaccine for combating the novel pathogen, training future laboratory personnel and health care practitioners. These tasks should be performed in at least three different levels of clinical microbiology laboratory including national reference, local clinical, and research microbiological laboratories. Increased laboratory capacity in countries in different levels and rapid, accurate diagnostic testing would significantly impact the control of COVID-19 pandemic.

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Comparison of the clinical and laboratory features of SARS-CoV-2 related multisystem inflammatory syndrome (MIS-C) with Kawasaki's disease (KD)

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ARTICLEINFO

Oral-Panel

Key words:
COVID-19, MIS-C, Kawasaki's disease.

ABSTRACT

Introduction:
New diseases often resemble the parable of the blind men and the elephant. MIS-C is a multisystem disease, and care for affected children requires coordination of many different Pediatric specialties include infectious disease specialist, rheumatologists, cardiologists, intensivists and hematologists. Although there is considerable phenotypic overlap with MIS-C and KD (40 to 50 percent) but direct comparison of the clinical and laboratory features of MIS-C with those of KD suggests that the new disorder is distinct from the other. While many children with MIS-C meet criteria for complete or incomplete (KD), the epidemiology differs from that of classic KD. The frequency of cardiac involvement in MIS-C is uncertain. Echocardiographic findings may include depressed LV function and coronary artery (CA) abnormalities (including dilation or aneurysm), mitral valve regurgitation, and pericardial effusion. Patients with MIS-C are older and have more intense inflammation and greater myocardial injury than patients with KD, and racial and ethnic predominance differs between the conditions. In MIS- C gastrointestinal symptoms (particularly abdominal pain) are very common, Myocardial dysfunction and shock occur more commonly, Inflammatory markers (especially CRP, ferritin, and D-dimer) tend to be more elevated. In addition, absolute lymphocyte and platelet counts tend to be lower in MIS-C compared with classic KD. These clinical features can help distinguish MIS-C from KD, but ultimately the designation of MIS-C versus KD is based on SARS-CoV-2 testing and exposure history.

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Periprosthetic Joint Infection

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ARTICLEINFO

Oral-Panel

Key words:
Diagnosis, Infection, Management, Total joint arthroplasty.

ABSTRACT

Introduction:
Periprosthetic joint infection (PJI) is one of the most devastating and costly complications following total joint arthroplasty (TJA). Diagnosis and management of PJI is challenging for surgeons. There is no "gold standard" for diagnosis of PJI, making distinction between septic and aseptic failures difficult. Additionally, some of the greatest difficulties and controversies involve choosing the optimal method to treat the infected joint.
For the panel of PJI we will present a case of simultaneous bilateral total knee replacement, which were both infected and neglected for one and a half year. We will discuss around the subject emphasizing on prevention and diagnosis.

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Prophylaxis of Infection during Chemotherapy-Induced Neutropenia in High-Risk Adults

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ARTICLEINFO

Oral-Panel

Key words:
Chemotherapy, Neutropenia, infection, Prophylaxis.

ABSTRACT

Introduction:
Intensive Cytotoxic Chemotherapy Can cause severe and sometimes prolonged neutropenia, which may result in hospitalization for treatment of fever or cause potentially fatal infection. One approach to reducing infectious complications involves the use of prophylactic antibacterial, antiviral, and antifungal agents in patients at significant risk of such infections. It is crucial to assess the risk of serious complications in patients with chemotherapy-induced neutropenia; prophylaxis is generally indicated for high-risk patients, defined as those who are anticipated to have an absolute neutrophil count (ANC) <500 cells/microL for > 7 days.

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Human Papilloma Virus Infection in Immune Deficiencies

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ARTICLEINFO

Oral-Panel

Key words:
Human papilloma virus, Immune deficiencies.

ABSTRACT

Introduction:
Human papilloma viruses (HPVs) viruses that infect the keratinocytes in the epithelium of the skin and mucosa, being responsible for cutaneous warts, genital wart, or papillomatosis. Cellular immunity is the most important effector for HPV. An immune deficiency must be suspected in patients where warts are: Generalized, sever, recalcitrant. Immune deficiencies associated with warts can be classified into three categories: 1.it is represented by two diseases, epidermodysplasia verruciformis (EV) and respiratory papillomatosis (RRP), in which the clinical spectrum is strictly restricted to a susceptibility to HPV. 2. Consists of immune deficiencies in which warts represent the main or a very frequent feature of the disease. In this category, patients have manifestations in addition to warts, unlike EV patients. The disease such as WHIM syndrome, DOCK8 deficiency, GATA2 deficiency, Netherton syndrome, STK4 or MST1 deficiency, RHOH deficiency, Idiopathic CD4 lymphopenia. This category is represented by immune deficiency in which warts have been reported but do not represent a main feature of the disease. The disease such as NEMO, Wiskott-Aldrich syndrome, XSCID, JAK3-SCID, CVID, ataxia telangiectasia. In addition, some secondary or acquired immune deficiencies may be associated with warts.

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Antibacterial Effect of Nano Tex Napkins and Its Comparison with Soap and Hand Rub In Hospitals

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ARTICLEINFO

Oral-Panel

Key words:
Disinfectant, Hand wash, Hand rub, Nano Tex.

ABSTRACT

Introduction:
Hand hygiene is approved beneficial to prevent hospital-acquired infection (HAI) Method: twenty people who moistened their hands with E coli solution after washing their hands with soap, and placed their fingertips on growth medium. Again, the same people were considered as the case group and used hand rub, soap, nano tex napkin (ntn) rub and ntn contact. They moistened their hands with E coli solution and then disinfected their hands in four ways, and then sampling was conducted.
Findings: Based on the results of Kruskal-Wallis test for 100 samples, the ranks of soap, hand rubs, napkin rubs, and napkin contact were 17.74, 29.33, 41.79, and 62.20, respectively. The number of colonies of soap, napkin rubs and hand rubs groups was P-value <0.001 compared with control group while it was P-value >0.001 in case of napkin contact. Comparing the napkin rubs and soap showed that the hand rub of each had P-value >0.001.
Conclusion: Soap has the minimum and napkin contact has the maximum rank means. All soap, napkin rub, and hand rub groups showed significant difference with control group, the differences between soap and napkin rub groups and hand rub and napkin rub groups are significant.

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Evaluation of Neonatal Mortality of Mothers with Coronavirus COVID-19 in Imam Reza Hospital Of Mashhad- Iran

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ARTICLEINFO

Oral-Panel

Key words:
COVID-19, Iran, Mortality, Mashhad

ABSTRACT

Introduction:
The coronavirus was introduced as a pandemic by the World Health Organization in March 2020. In Iran, COVID-19 has started since late February 2020 and continues to this day. We decided to investigate the mortality of infants born during the coronavirus because Infant mortality with Covid-19 statistics is not yet available in the region Mashhad, Khorasan Razavi, northeastern Iran.

Materials and Methods:
This descriptive cross-sectional study was performed from March 21 to August 21, 2020, on the inpatients at neonatal intensive care unit (NICU) of Imam Reza Hospital in Mashhad, Khorasan Razavi Province, the northeastern region of Iran. In this study, the case of neonates was perused whose mothers had COVID-19 disease was confirmed by PCR or clinical signs along with hematologic changes, radiography or CT scan with lung disease.

Results:
This study was performed on 62 infants for five months. During this period, one of the infants weighing 900 grams died, which according to careful investigations, the cause of death was Enterobacter sepsis. A hospitalized infant suspected of having COVID-19 has also died and his PCR test is missing but other tests did not show COVID-19.

Conclusion:
Infants of mothers with COVID-19 have a very low chance of dying.Despite the low mortality in this study, there is a need for further investigation into neonatal mortality.

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Management of Drug-Resistance Gram-Negative Infections

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ARTICLEINFO

Oral-Panel

Key words:
Drug, Gram-negative infections, Management, Resistance.

ABSTRACT

Introduction:
More than 2.8 million cases of antibiotic-resistant infections occur annually in the United States, of which about 35,000 die each year. Among them, multi-drug resistance gram-negative bacilli are the most significant case and the biggest challenge is related to the limitation of effective antibiotics. Increasing in drug resistance gram-negative bacilli and the lack of effective treatment choices leads to prolonged hospital stay, resistant nosocomial infections in intensive care units, surgery, burns, transplants and patients. The following important points should be considered when deciding to manage gram-negative infections: patient safety; pharmacokinetic and pharmacodynamics properties of the drug; microorganism's characteristics; and the effect of treatment on community. It should be noted that without considering the effective factors that directly or indirectly could be influenced on the management of gram-negative infections, successful treatment cannot be achieved. Numerous scoring systems have been proposed to screen high-risk individuals for multidrug-resistant gram-negative infections, and several factors have been identified. The most important risk factors include recent hospitalization in the last two to three months, receiving antibiotics for the past two months, Residence of day care centers, hemodialysis, use of broad-spectrum antibiotics during previous infections, previous infection with multi-drug resistance organisms and colonization with carbapenem-resistant *Enterobacteriaceae* (CRE). Recommendations for controlling CRE spread in outbreaks, non-outbreaks and new CRE occurrences: hand washing, Contact Precautions, Isolation in single room, environmental disinfection and eradication, environmental screening, rational use of antibiotics, active monitoring with culture, identify CRE patients in the medical record, cohorting patients, cohort personnel, personnel screening and CRE eradication in colonized patients.

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The Role of Ventilation in Clinical Centers, Intensive Care Units, and Reducing the Infection Amount Of These Places

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ARTICLEINFO

Oral-Panel

Key words:
Aerosol, Hospital, Infection, Work place, Ventilation.

ABSTRACT

Introduction:
Small droplets from sneezing, coughing, or talking of a person (especially a sick one) are sprayed in the environment while a safe physical distance is not maintained and a suitable face mask is not worn. These droplets can cause pathogenicity and diseases by being evaporated and dehydrated if they are breathed in and enter a host's respiratory system. Providing ventilation systems in clinical centers, hospitals and other residence and work places can be effective in eliminating the aerosols containing pathogens (by air filtration) or diluting the concentration of these aerosols (by removing them from the environment and replacing clean and fresh air). In other words, such an attempt can be influential in preventing the airborne transmission of pathogens in epidemics/pandemics such COVID-19 and flu. Utilizing ventilation systems in natural, mechanical and combined methods should be implemented in a way that reasonable times of air changes are done with good timing in enclosed environments, especially in clinical centers. In this short lecture, it is tried to discuss the ways that bioaerosols are created and what are their control methods, with a focus on using appropriate ventilation systems in enclosed environments (hospitals, clinical centers, classrooms, office rooms, etc.) and in epidemics/pandemics caused by airborne bioaerosols.

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Treatment Options: Which Medications are Safe to Use in Pregnant Patients?

Sara Mirzaeian

ARTICLEINFO

Oral-Panel

Key words:
COVID-19, Medication, Pregnancy.

ABSTRACT

Introduction:
The Covid-19 pandemic has placed extreme stress on the national health care system. Obstetrics care providers must manage pregnant patients with Covid-19.
A large number of treatment options have been used for treatment of Covid-19 disease. Proposed therapies have included Azithromycine, remdesivir, Bacillus-Calmette-Guerin Vaccine and convalescent plasma. None of these therapies are contraindicated in pregnancy. For all patients with symptomatic Covid-19 upon admission on the labor and delivery ward should receive obstetrics and medications, but specific interaction may occur. This requires special caution and close observation. Bethamethason and Dexamethasone for fetal lung maturation, magnesium sulfate for neuroprotection and nifedipine for tocolysis can be used. Deep venous thrombosis prophylaxis should proceed for at least 10 days. During postpartum, oxytocin should be used carefully and not use methyl ergomethrine for management of uterine atony.

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The Status of Azole-Resistant Aspergillus Fumigatus Isolates in Iran

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ARTICLEINFO

Oral-Panel

Key words:
Aspergillus fumigatus, *Azole resistance, Compost, TR34/L98H, TR46/Y121F/T289*

ABSTRACT

Introduction:
As triazole antifungals are the mainstay of therapy in the management of invasive aspergillosis, azole-resistant *a fumigatus* has become a major medical concern and with complicated clinical management. Azoles are the first-line drugs and are widely used for the management and prophylaxis of aspergillosis. Azole resistance in *Aspergillus fumigatus* is an emerging problem and reported from all continents. An emerging issue is the increasing incidence of resistant isolates with point mutation worldwide, i.e., Cyp51A TR34/L98H, and TR46/Y121F/T289A, have emerged over the last decade. Azole-resistant isolates were prevalent in clinical settings in European countries; many of the reports are from the Netherlands, UK, and Germany. In contrast, reports on azole-resistant *A. fumigatus* isolates from Iran is still few and have only recently begun to increase. Herein, the status of azole-resistant *A. fumigatus* isolates was reviewed, and a complete list of resistant isolates from Asian countries and Iran is provided. Recently *A. fumigatus* with TR34/L98H, and TR46/Y121F/T289A mutation has reported. Therefore. Monitoring and surveillance of antifungal susceptibility of clinical *A. fumigatus* is warranted in Iran and elsewhere in the region.

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Helicobacter Pylori infection in Children: Introduction and Diagnosis

Maryam Shoaran

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ARTICLEINFO

Oral-Panel

Key words:
Children, Diagnosis
Helicobacter pylori.

ABSTRACT

Introduction:
Helicobacter pylori (HP) is a gram-negative, helical, microaerophilic bacterium responsible for one of the most prevalent chronic bacterial infections in pediatric population. Currently, up to 80% of children in developing countries are infected. Even though most of patients remain asymptomatic during the life, this infection is usually lifelong, unless specifically treated. In 1983, Warren and Marshal discovered the organism. Since then studies have shown that gastrointestinal infection with HP is the leading cause of peptic ulcer disease. This organism contributes in the pathogenesis of chronic gastritis, mucosa-associated lymphoid tissue (MALT) lymphoma and gastric adenocarcinoma. There are invasive and noninvasive tests for the diagnosis of HP infection in children. The gold standard for diagnosis is either pathologic assessment together with rapid urease test (RUT) or tissue culture on samples obtained by endoscopy. Non-invasive tests include urea breath test (UBT), antibody detection, or HP stool antigen test. When treatment is indicated, successful eradication of HP should be assessed by UBT or HP stool antigen test. The old terms describing the colonization of gastric antrum by HP into acute, chronic, and chronic-active are nowadays replaced with mild, moderate, or marked by Sydney classification system. Classification is a semi-quantitative method based on topography and the presence of histologic parameters such as inflammation, activity, atrophy, intestinal metaplasia, and H. pylori infection.

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Employee Health Literacy, Infection Control and Prevention

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ARTICLEINFO

Oral-Panel

Key words:
Employees, Health literacy, Infection control, Prevention

ABSTRACT

Introduction:
Health literacy is now a global issue in the 21st century, and the World Health Organization has advised countries around the world to establish a center to monitor and coordinate strategic activities to promote health literacy. In a large national survey in the United States, 43% had inadequate health literacy. According to the World Health Organization, health literacy is cognitive and social skills that lead to the motivation and ability of individuals to acquire understand and use information in a way that promotes and maintains health. Because employees, in addition to promoting their own health, play an important role in the environment and for many people are considered health counselors, employees have also the best ability to change their behavior (e.g. improve communication skills) to help others, and studies have shown Promoting employee health is cost-effective, and employees can improve health outcomes at a reasonable cost because they have a greater ability and willingness to follow instructions when managing infectious diseases, and if the content of instructions and how to communicate with appropriate support from managers, the prevailing culture for work environment, training, physical space, and trust are accompanied by greater employee commitment.

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Researches Strategy for Coronavirus Vaccine

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ARTICLEINFO

Oral-Panel

Key words:
COVID-19, Research, Vaccine.

ABSTRACT

Introduction:
COVID-19 is an infectious disease caused by a newly coronavirus named SARS-CoV-2. The SARS-CoV-2 pandemic presents an extraordinary challenge to global health. There are currently no FDA-licensed vaccines to prevent COVID-19 but there was attempt to produce vaccine against this life threatening virus. The aim of this study is to describe current recommendations regarding the researches strategy needed to development of vaccines to prevent COVID-19.

Method and Materials:
In this study we review strategic plan for COVID-19 vaccine research by the National Institutes of Health (NIH) and FDA's current recommendations for researches about vaccines to prevent COVID-19.

Results:
There were multiple steps for producing a safe SARS-CoV-2 vaccine. These include of exploratory studies, pre-clinical studies, clinical studies, regulatory review, manufacturing and quality control. Nonclinical studies in animal models help to identify safety risks and selection of dose and route of administration to be used in clinical studies. Clinical studies typically have carried out in three phases. Initial human studies, referred to as Phase 1, are safety and immunogenicity studies that should performed in a small number of closely monitored subjects. Phase 2 studies are dose-ranging studies and can enroll hundreds of subjects. Finally, Phase 3 trials typically evaluate effectiveness and enroll thousands of individuals. Randomized controlled trial with 1:1 randomization between vaccine and placebo groups is recommended study design for demonstrating vaccine efficacy. Healthy adult participants who are at low risk of severe COVID-19 is the best population for inclusion in early studies. Virologically confirmed SARS-CoV-2 infection with one or more of COVID 19 disease symptoms should consider as the primary endpoint. Virologically confirmed SARS-CoV-2 infection with one or more symptoms of severe COVID 19 disease should consider as the secondary endpoint. Long safety monitoring may be warranted for certain vaccine platforms.

Conclusion:
Attempt for producing SARS-CoV-2 vaccine should include multiple approved research steps with direct evidence of vaccine safety and efficacy in protecting humans from SARS-CoV-2 infection.

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Proper Antibiotic Prescription in Lower Respiratory Tract Infection

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ARTICLEINFO

Oral-Panel

Key words:
Antibiotic prescription, Children, Lneumonia.

ABSTRACT

Introduction:
Oral high dose amoxicillin in three divided doses is the drug of choice in less than five years old age children with mild uncomplicated pneumonia. In children with non-type 1 hypersensitivity reactions to penicillin, a second- or third-generation cephalosporin and in cases with type 1 hypersensitivity reactions to penicillin, clindamycin, a macrolide, or Linezolid may be used. In children who fail to improve within 48 to 72 hours of amoxicillin, a macrolide would be started. For children greater than 5 years with mild pneumonia, amoxicillin or a macrolide or both should be started based on clinical and radiological suspicion to typical or atypical pneumonia. In countries with high level of Macrolide resistance among atypical bacteria, levofloxacin and doxycycline are alternative drugs. In children who need admission due to pneumonia, a third generation cephalosporin and a macrolide are appropriate empiric antibiotics. Levofloxacin is alternative of both in areas with high prevalence of cephalosporin resistant *Streptococcus pneumonia* and/or macrolide resistant *Mycoplasma pneumonia*. In more severe cases adding clindamycin or vancomycin for coverage of *Staphylococcus aureus* and oseltamivir for treat of suspected Influenza is appropriate. Ceftaroline a fifth-generation cephalosporin is an alternative for coverage of resistant Staphylococcus *aureus* and *Streptococcus pneumonia*. In critical or life threatening pneumonia that requires admission to Intensive Care Unit, combination of vancomycin, naficillin, a third generation cephalosporin, a macrolide and oseltamivir is recommended. Linezolid can be substituted for vancomycin and nafcillin and the third generation cephalosporin in this regimen. For selection of the best empiric antibiotic in treatment of CAP factors such as probable pathogen, local antimicrobial resistance pattern, severity of the infection, predisposing condition, safety, and cost should be considered.

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Emojis and Hand Hygiene Behavior: A Literature Review

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ARTICLEINFO

Oral-Panel

Key words:
Behavior, Emojis, Hand hygiene.

ABSTRACT

Introduction:
Health care-associated infections (HAIs) are known among the most common complications in healthcare delivery, causing millions of deaths globally every year. Emojis could be useful to overcome barriers to improve hand hygiene understanding by targeting the gap that exists between the classic approach to teaching and the nonverbal, intuitive way that many people learn.

Material and Methods:
We conducted a literature review in PubMed Central and Google Scholar using the keywords "emoji" and "hand hygiene" with no time limit.

Results:
Of 34 retrieved studies, our search yielded only one eligible study published in 2019. The authors of the aforementioned study revealed the significant appropriateness of the existing emojis related to the words used in the WHO's "My 5 Moments for Hand Hygiene" poster.

Conclusion:
Emojis have the potential for promoting hand hygiene behavior provided that they clarify information through adding dynamicity to verbal cues that may lead to a more accurate perception of the intentions of the hand hygiene action. According to the satisfactory results of the only evidence existing, further research is necessary to evaluate the effects of emojis on hand hygiene.

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Brain Abscess

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ARTICLEINFO

Oral-Panel

Key words:
Brain abscess, Diagnosis, Treatment, Surgery.

ABSTRACT

Introduction:
Despite all advantage of medicine, brain abscess are still a challenging pathology of CNS. Abscess formation within the CNS often occurs in patients with predisposing factors, and middle age with male dominancy. Clinical triad of headache, fever, loss of consciousness may not see in all patients. Although, 60% of brain abscess are bacterial, neurosurgical intervention for diagnosis of pathogen and sometimes as treatment always is necessary. Neurosurgical procedures are aspiration either stereotactic or free hand or resection of abscess. Antimicrobial therapy should be started as soon as possible, based on pathogen or empirical based on the organisms that are the most likely cause of the disease, as determined on the basis of the route of infection and/or predisposing condition. Prognosis depends on pathogen, co- morbidities and level of the consciousness at admission.

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Clinical Microbiology Laboratory Role in Diagnosis and Treatment of Bacterial Bloodstream Infections

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ARTICLEINFO

Oral-Panel

Key words:
Bacterial bloodstream infection, Diagnosis, Laboratory, Microbiology, Treatment.

ABSTRACT

Introduction:
In the clinical microbiology laboratory blood cultures are a vital technology for isolating bacteria and fungi. The blood cultures are the reference standard for diagnosing bloodstream infection and are considered a prerequisite for targeted antibiotic treatment. Diagnostics with blood cultures can reduce mortality, length of hospital stay and hospital expense. The first case of bacteremia was detected by Pseudomonas aeruginosa in 1899; ten years later less than 40 cases were reported worldwide. Mortality rate with septicemia increased 40 fold in 1950-2003. According to studies in the USA, septicemia was recorded as 11th leading cause of death (1.4%of total death) and bacterial sepsis was the 7th leading cause of death among infants (2.6% of infant death) in 2010. Recent reports indicating 70% mortality in patients with severe sepsis and septic shock. Establishment of a clinically significant bloodstream infection requires one or more of the following conditions: (1) introduction of an inoculum large enough to overwhelm normal defenses, (2) preexisting impairment of defense mechanisms and (3) adaptation of the invading organisms to survive in the blood. During the last decade the increase in antimicrobial resistance has highlighted the importance of blood cultures, which became an indispensable prerequisite for any targeted, efficient therapy.

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Role of Antibiotics Susceptibility Testing in Patients' Management

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ARTICLEINFO

Oral-Panel

Key words:
Antibiotics susceptibility testing, Infectious diseases, Management.

ABSTRACT

Introduction:
Clinical management of infectious diseases remains a challenging part in patient's management especially concerning empirical and targeted treatment with antibiotics. Years of antibiotic misuse and overuse have caused many antibiotic resistances around the world. When dealing with multi drug resistance organisms, delayed treatment or incorrect treatment can lead to higher mortality and selecting the right antibiotics can lead to improved survival outcomes. Antibiotics susceptibility testing also help support empirical decisions, which are especially important when there is a paucity of antibiotics resistance data for these agents. For prevention of further resistance and better clinical response, accurate and timely antibiotics susceptibility testing must be performed to precisely guides the selection of patient therapy. In addition to solely detecting the antibiotics resistances, microbiology laboratories should collaborate in data analysis and policy making for infectious diseases therapy. For this purpose, collaboration between microbiology laboratories and infectious disease physicians is necessary to achieve this goal. Therefore, the managing team for antimicrobial stewardship program should consist of physicians, pharmacists, nurses and microbiologists. The microbiologists need to be aware not only of resistance rates in general, but also of rates in their specific environment. This team is responsible for making formulary decisions, developing guidelines for empiric therapy and monitoring resistance rates over time. Successful antibiotic stewardship programs require a sustained and seamless level of monitoring and decision-making regarding antibiotic therapy.

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Emerging /Remerging Arboviruses Causing Meningitis /Encephalitis in Iran

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ARTICLEINFO

Oral-Panel

Key words:
Arboviruses, CNS infection, Human, Iran.

ABSTRACT

Introduction:
There are many neurotropic viruses from different families which can cause CNS infection in human. The best-known neurotropic viruses include Herpes Simplex Virus, Rabies Virus and Polio virus. However, in recent years new neurotropic viruses mostly belong to the group of Arboviruses (Arthropod-Borne Viruses) emerged due several factors such as climate change, globalization and deforestation. The majority of neurotropic Arboviruses belong to four different families: Bunyaviridae, Reoviridae, Flaviviridae and Togaviridae. The only neurotropic Arbovirus that is definitely endemic in Iran is West Nile Virus, a mosquito-borne virus (genus Flavivirus within the family Flaviviridae). In nature, WNV circulates in a zoonotic transmission cycle between birds and mosquitos, principally the Culex species. Most human infections with WNV are asymptomatic and only 20% of infected cases develop a mild flu-like syndrome called West Nile fever. However, the severe form of the disease or WNV neuroinvasive disease (WNND) is observed in about 1 out of 150 infected individuals. Additionally, a seroprevalence study showed the circulation of Tick-Borne Encephalitis virus (TBEV) in northern Iran. In nature, TBEV circulates in an enzootic cycle between ticks and mammals. Small mammals such as rodents and insectivores are incriminated as natural reservoir hosts. Humans may incidentally acquire infection via tick bites or consumption of raw and unpasteurized dairy products.

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Hand hygiene and cutaneous side effects

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ARTICLEINFO

Oral-Panel

Key words:
Allergic contact dermatitis, Hand hygiene, Management, Product.

ABSTRACT

Introduction:
Sometimes preservation of good hygiene for hands in health care workers can cause some problems. On the other hand, skin has two important barriers, including stratum corneum of epidermis and surface lipid. Frequent use of soaps, handrubs etc may be damage to these barriers .The most common skin reaction is irritant contact dermatitis. Potentially each person could be affected with this problem if exposed for enough exposure time and concentration, therefore this potential can vary between different person and this reaction may have different clinical pictures. The other type of skin reaction that is relatively rare in comparison to irritant contact dermatitis is allergic contact dermatitis. There are some methods to protect skin barrier and to reduce this adverse effects, including using product with lower potential for irritation, avoidance of unnecessary irritants and proper use of moisturizing skin care products.

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Important Points in Issuing a Death Certificate

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ARTICLEINFO

Oral-Panel

Key words:
Burial permit, Death certificate, Undoubted death.

ABSTRACT

Introduction:
There are differences between death certificate and burial permit. Death certificate means confirmation of individual death and transfer permit to the hospital morgue, but burial permit is permit for burial. As soon as the death is confirmed, the doctor is obliged to issue a death certificate, but In case of some deaths such as: poisoning, traffic accidents, unknown persons, death in prison, sports accidents, etc., the doctor is not allowed to issue a burial permit and it is necessary to send the body to the forensic autopsy room for examination. In summary, the treating physician can issue a burial permit under three conditions: 1- Know the exact cause of death. 2- The cause of death is 100% of the disease, and trauma does not play a role in it (natural death). 3- The probability of filing a complaint now or in the future is near zero. (Undoubted death) Death due to COVID-19if other factors such as poisoning, traffic accidents, etc. are not involved, it is considered natural death and a burial permit can be issued.

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Laboratory Detection of Respiratory Virus Infection

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ARTICLEINFO

Oral-Panel

Key words:
Acute respiratory infections, Laboratory detection, Viral pathogens.

ABSTRACT

Introduction:
Acute respiratory infections account for 75% of all acute morbidities, hospitalization and mortalities worldwide, among which acute viral respiratory tract infection is the leading cause (approximately 80%). The important viral pathogens include Influenza viruses, Respiratory syncytial virus (RSV), coronaviruses and, adenoviruses.

The non-specific clinical presentation of respiratory infections poses a significant challenge to the differential diagnosis of these pathogens. In other words, because a variety of pathogens that cause acute respiratory infections produce similar clinical presentations, etiology studies require laboratory diagnostics covering a wide range of pathogens. Accurate and fast diagnosis of the viral pathogens is important to select the appropriate treatment, stop the epidemics, reduce unnecessary use of antibiotics, reduce the length of hospital stay and finally save people's lives. In the last decade, there has been considerable improvement in the detection of respiratory pathogens with the availability of point of-care (POC) testing. Although an increasing number of laboratories are adopting rapid molecular assays, conventional testing methods, such as culture and immunodiagnostics are still used. Furthermore, to ensure maximum accuracy of diagnostic results appropriate specimen collection and handling are necessary. This requires the timely provision of properly collected specimens to the laboratory. Provision appropriate transport systems for timely delivery of specimens to the lab are critical for accurate lab results.

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Neonatal Prevention of COVID-19 Infection and Breastfeeding

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ARTICLEINFO

Oral-Panel

Key words:
Breastfeeding, Coronavirus, Hand washing, Mask, Newborns, Prevention.

ABSTRACT

Introduction:
Breast milk feeding is the healthiest food for the baby, even in infections, and it has proven numerous benefits in increasing the baby's health. In addition to the known benefits of breastfeeding, mother's milk may provide protective factors to the infant after maternal COVID-19 infection. No study to date has demonstrated the presence of SARS-CoV-2 in breast milk. WHO recommends that mothers with suspected or confirmed COVID-19 should be encouraged to initiate or continue to breastfeed. Mothers should be counseled that the benefits of breastfeeding substantially outweigh the potential risks for transmission. Early skin to skin contact, breastfeeding in the first hour and rooming in of mother and infant are recommended. Before breastfeeding hand washing with soap and water, and if are not available, hand sanitizer should be done with a solution containing at least 60% alcohol and a mask with mouth and nose cover are recommended. If mothers are too ill to breastfeed, they should still be supported to express their milk, and the infant should be fed by a healthy individual. Before starting the milking process, wash her hands thoroughly and thoroughly with soap, water or a suitable detergent according to the instructions. Frequent hand expression or pumping, ideally with a hospital-grade pump, will help her establish and build milk supply if mother are separated from her newborn.

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Prevention of Neonatal Late Onset Sepsis in Preterm Infants

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ARTICLEINFO

Oral-Panel

Key words:
Late Onset Sepsis, Preterm infants, Prevention.

ABSTRACT

Introduction:
Newborn are extremely susceptible to infection and sepsis is a significant cause of morbidity and mortality in this population.
Neonatal sepsis is categorized according to the infants' postnatal age at onset of disease and divided to post-natal age at onset of disease and divided to early onset sepsis as the occurring at the before 72 hours of life and late onset occurring at greater than 72 hours to 7 days. In early onset sepsis infants require infection by vertical transmission either through ascending amniotic fluid infection or from the mothers' urogenital tract during vaginal delivery. Risk factors of late onset sepsis: prematurity, immaturity of immune system in preterm infants, long hospitalization of preterm infants, formula feeding, invasive instrument in NICU such as catheter, ET tube, mechanical ventilation, TPN, unwashed hands-histamine two and asteroids. Prevention: the minimal use of central line that produces central line associated blood stream infection (CLABSI), the use of new antiseptic and anti-microbial catheter, comprehensive catheter-care during insertion and proper management of it, hand hygiene, appropriate use of antibiotics and limited and use of histamine 2 blockers and PPIs, exclusive maternal milk feeding, probiotic prophylaxis require further study, use of lactoferin can be effective, use of monoclonal antibody against staphylococcus is not effective, use of G-CSF-KMC- vitamin A are effective low dose, vancomycin is effective but not routinely recommended and finally IVIG is not effective in reduction of mortality.

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Decision Making For Pregnancy Termination in Covid-19 Pandemic

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ARTICLEINFO

Oral-Panel

Key words:
Covid-19 pandemic, Decision making, Pregnancy, Termination.

ABSTRACT

Introduction:
Multidisciplinary team (MDT) consists of consultant obstetrician, consultant anesthetist, and consultant neonatologist and infection control team. For most women with preterm COVID-19 and no severe illness that have no medical/obstetric indications for prompt delivery, delivery is not indicated and ideally will occur sometime after a negative testing result is obtained or isolation status is lifted, thereby minimizing the risk of postnatal transmission to the neonate. For most women with preterm COVID-19 and no severe illness who also have medical/obstetric complications (e.g., prelabor rupture of membranes, preeclampsia), the timing of delivery is, in general, determined by usual protocols for the specific medical/obstetric disorder. For the hospitalized patient with severe illness: some authorities have advocated consideration of delivery in pregnancies >32 to 34 weeks in the setting of worsening status. The rationale is that delivery is performed before the pulmonary situation worsens and ongoing maternal hypoxemia places the fetus at risk of compromise. Most authorities do not advocate delivery prior to 32 weeks. Delivery should be preferably at tertiary care center. Efforts should be made to minimize the number of staff members entering the room and units. Maternal observations and assessment should be continued as per standard practice, with the addition of hourly oxygen saturations. Aim to keep oxygen saturation more than 94%, titrating oxygen therapy accordingly. Maternal observations including temperature, respiratory rate & oxygen saturations. Confirmation of the onset of labor, as per standard care. Electronic fetal monitoring using cardiotocograph (CTG). Hourly oxygen saturation during labor.

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Neurotuberculosis and Neurobrucellosis

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ARTICLEINFO

Oral-Panel

Key words:
Diagnosis, Neurotuberculosis, Neurobrucellosis, Treatment.

ABSTRACT

Introduction:
CNS TB continues to be a major cause of morbidity and mortality, with the majority of people affected living in low-income and middle- income countries. Newer diagnostic assays promise to increase the speed of diagnosis and improve appropriate selection of antituberculous therapy and anti-inflammatory medications. Despite these advances, CNS TB remains difficult to diagnose, and clinicians should have a low threshold for initiating empiric therapy in patients with presumptive infection. Although improvements in our understanding of the pathogenesis and management of CNS TB have occurred over the past 50 years, the emergence of multidrug-resistant and extensively drug-resistant TB, the advent of acquired immunodeficiency syndrome (AIDS), and the subsequent availability of highly active antiretroviral therapy that can produce the immune reconstitution inflammatory syndrome have complicated the diagnosis and treatment of CNS TB. Advances in diagnostic assays promise to increase the speed of diagnosis as well as the percentage of people with a confirmed rather than a presumptive diagnosis. Brucellosis is a zoonotic disease causing serious public health problems in countries of the Middle-East and developing countries .The neurobrucellosis is an uncommon disease; it can develop from a systemic brucellosis or due to direct central nervous system (CNS) infection. The clinical syndrome is diverse, including meningoencephalitis, myelitis, peripheral and cranial neuropathies and psychiatric manifestations. Neurobrucellosis needs to be kept in mind in the differential diagnosis of fever of unknown origin involving neurological symptoms and systemic involvement. Prognosis is good if there is a combination of antibiotics, each with different mechanisms of action given in full dose.

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COVID 19 Pandemic and the Need To Follow Preventive Guidelines

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ARTICLEINFO

Oral-Panel

Key words:
COVID-19, Community intervention Hand hygiene.

ABSTRACT

Introduction:
In the present century, human beings have been faced with emerging and re-emerging diseases. What is worrying about emerging diseases is lack of knowledge about them. What we can say about emerging diseases with confidence is prevention. The definition states that prevention means preventing a situation from becoming worse. Based on this, levels of prevention action are defined, which are: Essential, primary, secondary, tertiary and fourth levels. What is most prominent in the prevention of new coronavirus disease is primary and secondary prevention that means protection against exposure to the formed risk factor and early diagnosis and treatment (isolation, contact tracking, etc.). In the category of primary prevention, what will be very important is to observe hand hygiene. In the category of primary prevention, the risk factor has been formed and we seek to prevent the disease from occurring in the face of the risk factor. Observing hand hygiene in the community along with using masks, observing respiratory etiquette, social distancing and canceling gatherings will help communities to control the disease.

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Ethical Challenges of Patient Care with Infectious Diseases Based on Professional Concepts

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ARTICLEINFO

Oral-Panel

Key words:
Care, Corona, Infectious diseases, Professionalism.

ABSTRACT

Introduction:
Professional ethics is the spirit of the performance of health service providers and a guarantee of the correctness of their actions, which has always, even regardless of the results of the professional activity of its perpetrators, sent the message of altruism, honesty and respect to its recipients. The original concept of professionalism and its performance, regardless of rhetoric and extremism, has a tremendous impact on the results of health interventions at all aspects and levels (prevention, diagnosis, treatment, care, promotion, etc.); there has been and are a change in the performance of society and a change in the pattern of demands of stakeholders. The existence of subjects such as respect, justice, altruism, honesty, responsibility, professional commitment and… are the principles and foundations of professionalism. Various studies show that the majority of complaints and grievances about the provision of health services in all parts of the world is not related to the scientific process of treatment or diagnosis or. . . but of the type of dealing with clients and how we behave professionally part of which are scientific and practical skills. Scholars believe that the main reason is that the performance of the service provider group, despite having science and knowledge, as well as a noble and heavenly motivation to serve, in the field of professional ethics is not within expectations and the result of all their efforts is subject to this damage. In this part of this important conference, we tried to discuss some ethical challenges of patient care based on professional concepts.

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Principles of laboratory diagnosis of CNS infections

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ARTICLEINFO

Oral-Panel

Key words:
Central nervous system infections, Culture, Microscopic morphology, Molecular methods, Rapid antigen testing, Pan-Omic techniques, SeRology.

ABSTRACT

Introduction:
Central nervous system (CNS) infections can be fatal in case of delayed diagnosis. As most CNS infections have non-specific symptoms and signs, the diagnosis is sometimes quite challenging. Proper treatment depends on prompt and accurate diagnosis, which requires proper specimen collection i.e. collecting the best specimen at the appropriate time, proper transportation, efficient processing, and implementation of appropriate laboratory tests, proper identification, and optimal communication between the treating physician and laboratory representatives. Each of these steps is crucial in the proper handling of the patient and the final outcome. We will discuss the issues related to specimen collection, transportation, and processing, and we will cover the main diagnostic methods, including conventional and new diagnostic methods, that will facilitate rapid diagnosis with high sensitivity and specificity. Molecular tests such as nucleic acid in vitro amplification-based methods, which are used routinely and have a rapid turnaround and higher sensitivity and specificity, compared to most of the conventional methods, will be addressed.

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A Glance at Bacterial Contamination of Blood Components

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ARTICLEINFO

Oral-Panel

Key words:
Blood transfusion, Blood components, Bacterial Infections.

ABSTRACT

Introduction:
Bacterial infections are one of the most important clinical complications of prescribing blood products. It is estimated that at least one unit out of every 2,000 units of platelets contains bacterial contamination, while the transmission of HIV and HCV virus is estimated to be one in 2 million units per injection. Recently, some studies in Japan have shown that 0.2% of blood products are contaminated. Bacterial contamination is more common in autologous blood products (3.6%). They were kept for four days. Platelet injections have a higher risk of contamination because the product is stored at room temperature. The incidence of severe septic attacks following blood transfusions is estimated to be one per 50,000 units of injected platelets and one per 500,000 units of injected red blood cells. Infectious reactions associated with injection of erythrocyte units are severe and are associated with 70% mortality. Acute reactions due to transfusion of blood contaminated with gram-negative organisms, especially Yersinia enterocolitica, are caused by endotoxins in blood products. This releases large amounts of cytokines such as TNF, which is an important factor in pathogenicity and shock. These complications are higher in units that have been stored for more than 21 days.

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Prevalence of Giardiasis in Failure to Thrive Children

Behrouz Bonyadi

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ARTICLEINFO

Oral-Panel

Key words:
Giardiasis, Hypoalbuminemia, Iron, Vitamin B12, Vitamin A.

ABSTRACT

Introduction:
Diarrheal disease remains the second leading cause of mortality in children in developing countries. Giardia lamblia is a common intestinal protozoan and the cause of chronic diarrhea in children. The epidemiology of the infection is determined by environmental and regional factors and humoral immunity. Structural changes of the gut such as cellular infiltration and villous atrophy, and functional derangements like malabsorption can explain part of the symptoms and side effect that is associated with diarrhea and, perhaps, adverse impact on growth and psychomotor development The application of different procedures for the parasitological diagnosis with a variable degree of sensitivity is the cause of difference in recorded prevalence data. Asymptomatic infection is common, while most people acquire infection in outbreaks occurring in child care settings and in the community remaining asymptomatic. Some of symptoms include acute infectious diarrhea, chronic diarrhea with failure to thrive, anemia, and vitamin deficiency. Symptoms vary by age, with symptomatic infections more frequent in children than adults. Children can have occasional days of acute watery diarrhea with abdominal cramps, that persistent with anorexia, flatulence, malaise, weakness, nausea, and vomiting, low-grade fever. Extraintestinal involvement such as arthritis, urticaria, iridocyclitis, retinal hemorrhage and bile or pancreatic ducts stenosis is unusual.

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Sun Exposure Predisposes To Lupoid Leishmaniasis

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ARTICLEINFO

Oral-Panel

Key words:
Leishmaniasis, Lupoid, Sun exposure.

ABSTRACT

Introduction:
Cutaneous leishmaniasis, which is caused by the transmission of Leishmania parasite by sand-fly bites to human skin and mainly in open areas of the body, has a very variable clinical course.
The causative agent of old world cutaneous leishmaniasis e in Iran is mainly two species L major and L tropica. Although most of these cases improve on their own in less than a year or two, chronic non-healing cases of the disease (lupoid leishmaniasis) are one of the therapeutic challenges in treating the disease.
Lupoid leishmaniasis lesions are mostly limited to the face and less so on the arms and forearms. In our clinical experience, even in these areas, lupoid lesions are seen in areas of the organ that are most exposed to the sun. In this article, while reporting several cases of cutaneous leishmaniasis in which clinical course of the lesions has been different in the exposed and covered areas, the possible role of sunlight in the clinical course of the lesions is discussed.

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How to Promote Hand Hygiene

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ARTICLEINFO

Oral-Panel

Key words:
Hand hygiene, Promotion, World Health Organization.

ABSTRACT

Introduction:
Hand hygiene is the best way to prevent infections in hospitals and community especially during COVID-19 pandemic. Alcohol-based hand rub (ABHR) was introduced to all countries by World Health Organization since 2006. It is well tolerated and time consuming and can be used at the point of care. System change (using ABHR instead of soap and water), education and training, feedback to health care workers,reminders in workplace and comunity such as posters and roll modelling by famous and lovable characters are some important ways to promote hand hygiene.Hand hygiene relay is one of the best solution for campaign fatigue. in this regard in September 2015 the Guinness world record on "hand sanitizing relay" was broken with 622 participants at the Imam Reza hospital in Mashhad. Children play a very important role in promoting hand hygiene in society, therefore two hand hygiene painting festivals were hold in 2014 and 2020 and a photo festival about "clean hands save lives" took place in Mashhad in 2017.

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Parasitic Lung Diseases

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ARTICLEINFO

Oral-Panel

Key words:
Diagnosis, Parasitic diseases, Lung.

ABSTRACT

Introduction:
Prevalence of parasitic diseases are associated with socioeconomic conditions and hygiene practices. But parasitic infections are increasingly being reported during the last years even in countries with high socioeconomic status due to increase in the numbers of immunocompromised individuals. Pulmonary parasitic diseases can range in broad spectrum of clinical manifestation from mild self-limiting bronchitis to life-threatening acute respiratory distress syndrome. It is necessary to be differentiated parasitic lung infections from other infectious and noninfectious diseases of respiratory tract. Pulmonary parasitic infections are classified into protozoal and helminthic infections. Lung parasitic infections may be present in a variety of clinical manifestation with a focal or diffuse lung disease. Cystic lung lesions develop in hydatidosis, coin lesions in dirofilariasis, lung abscess in amebiasis, mediastinal lymphadenopathy in leishmaniasis and toxoplasmosis, acute respiratory distress syndrome (ARDS) in malaria, pulmonary infiltrates and eosinophilic pneumonia in infections caused by most helminths and pulmonary hypertension in schistosomiasis. Diagnosis of parasitic lung infections is a challenge due to their wide varieties of clinical presentations. A travel history to an endemic area increase the index of suspicion. The diagnosis depend on the demonstration of the parasite or each life-cycle stage in the sputum, stool, other body fluids, or tissue specimens. Radiological imaging plays an important role in diagnosis. Bronchoscopy, bronchoalveolar lavage study and lung biopsy may be required. Also, different serological and molecular techniques can be used.

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The Frequency of Erythrasma in Outpatients in Khuzestan Province, Over a Period of Eleven Years (2003-2014)

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ARTICLEINFO

Poster

Key words:
Corynebacterium minutissimum, Erythrasma, Frequency, Superficial mycoses.

ABSTRACT

Introduction:
Erythrasma, is an intertriginous infection usually found in individuals with susceptible factors .Current study was conducted for evaluating the frequency of erythrasma in outpatients attending to Ahvaz Iran-Zamin diagnostic laboratory, during eleven years.

Materials and Methods;
From 25643 cases were referred to Iran Zamin Medical diagnostic laboratory from different parts of Khuzestan province during 2003 to 2014, 942 had erythrasma. Age distribution was 1-67 years old. The skin of inguinal, inframammary, interdigital and axillary areas of all these patients were scraped and examined by direct examination with 20% KOH. In addition smears stained with 2.5% methylene blue.

Results:
Among suspected patients 942 (3.67%) had erythrasma infection. Regarding age distribution, 625 (66.0%) were male and 317 (33.6%) were female. In 87 patients with erythrasma, more than one area of the body was involved in the lesion. Erythrasma was detected in 802 (77.94%) of the inguinal regions and in other regions such as, axillary areas, interdigital and inframammary examination were positive in 133 (12.93%), 58 (5.63%) and 36 (3.5%), in order of frequency.

Conclusion:
Regarding site of infection, groin area had more frequency rate (77.94%) of infection, which is in agreement with previous researches.

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Captopril as a Novel Candidate for the Treatment of COVID-19: A Case Series

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ARTICLEINFO

Poster

Key words:
ACE inhibitor, COVID-19, Captopril, Therapy, SARS-CoV-2.

ABSTRACT

Introduction:
COVID-19 may lead to acute respiratory distress syndrome (ARDS) following pneumonia. There is no confirmed treatment for COVID-19, yet. To describe our experience using captopril in a series of patients with COVID-19 pneumonia.

Materials and Methods:
We did a study on 19 outpatients with confirmed COVID-19 pneumonia. Captopril was prescribed at a dose of 12.5-25 mg every 8 hours, based on the patients' blood pressure; and respiratory physiotherapy, as well. HRCT scanning and oxygen saturation (Spo2) measurements were done at the onset and following the treatment.

Results:
The mean (±SD) age of the patients was 47.84 ± 16.78 years, 68.4% were men. The most common symptoms were anorexia, shortness of breath, cough, and fever. The mean treatment duration with captopril was 12.63 ± 9.51 days. All the cases showed progressive improvement in clinical symptoms from the onset of treatment with captopril to the last day of follow-up. Similarly, their O2 saturation and HRCT findings were quite improved compared to before treatment.

Conclusion:
Captopril as an available drug could have a beneficial use in treating COVID-19 pneumonia and might have a role in hindering ARDS progression after SARS-CoV-2 infection.

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Evaluation of Antioxidant Status and Oxidative Stress Markers in HTLV-1 Infected Individuals: Correlation with the Severity of Virus-Induced Complications

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ARTICLEINFO

Poster

Key words:
Antioxidant, HTLV-1, HAM-TSP, Oxidative stress.

ABSTRACT

Introduction:
Human T-cell lymphotropic virus type 1 (HTLV-1) causes serious outcomes such as HTLV-1-associated myelopathy/tropical spastic paraparesis (HAM-TSP). In this study, we analyzed main antioxidant enzymes activity and principal oxidant markers status during oxidant/antioxidant imbalance in HTLV-1 infection.

Materials and Methods:
The study includes evaluation of serum activity of the three major enzymatic antioxidant defense systems; superoxide dismutase (SOD), catalase (CAT), and glutathione peroxidase (GPX), and measuring serum concentrations of two main oxidative stress markers: nitric oxide (NO) and malondialdehyde (MDA).

Results:
Oxidative stress markers were significantly higher in patients groups ($P<0.05$). In addition, a reductive trend was observed in the serum activities of CAT, SOD, and GPX in HTLV-1 infected patients compared with healthy control subjects($P<0.05$).

Conclusion:
Our data revealed a reduction in antioxidant enzyme activities during HTLV-1 infection, particularly in exacerbated condition, HAM-TSP. Additionally, increased serum levels of NO and MDA were observed.

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Antimicrobial Resistance Pattern of *Klebsiella Oxytoca* Isolated From Patients in Khorramabad, Iran

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ARTICLEINFO

Poster

Key words:
Antimicrobial resistance, Disc diffusion method, Klebsiella oxytoca.

ABSTRACT

Introduction:
The incidence of drug-resistant *Klebsiella oxytoca* is increasing today, so testing for drug susceptibility and resistance is essential. The aim of this study was to describe the pattern of antimicrobial resistance of *Klebsiella oxytoca* from clinical specimens.

Materials and Methods:
Between January 2019 and January 2020, 32 K. oxytoca were collected from specimens from hospitals of Khorramabad, Iran. Susceptibility test was performed by disc diffusion method accordance with Clinical and Laboratory Standards Institute (CLSI) guidelines.

Results:
The rates of resistance were as follows: ampicillin 30(93.8%), gentamicin10 (31.2%), SXT 19 (59.4%), nalidixic acid 19(59.4%), aztronam 10 (31.2%), Ciprofloxacin 15(46.9%), Cefotaxime 21(65.6%), imipenem 5 (15.6%), ceftazidime 14(43.8%), and amikacin 6(18.8%).

Conclusion:
In general, clinical *Klebsiella oxytoca* isolates had the lowest resistance to amikacin; which can be recommended as the most effective antibiotic.

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Investigating the Frequency of Multidrug-Resistant *Klebsiella Oxytoca* Strains in Khorramabad City Hospitals, Iran

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ARTICLEINFO

Poster

Key words:
Antimicrobial resistance,Multidrug resistant, Klebsiella oxytoca.

ABSTRACT

Introduction:
Klebsiella oxytoca is one of the significant bacterial isolate causing hospital-acquired infection and having multiple drug resistance (MDR) to antibiotics. MDR strains are resistant to at least one agent in three or more antimicrobial classes. The aim of this study was detection of the Frequency of multidrug-resistant *Klebsiella oxytoca* in Khorramabad city, Iran.

Materials and Methods
From January 2019 to January 2020, 32 *K. oxytoca* were collected from specimens in Khorramabad, Iran. Susceptibility test was carried out by disc diffusion method accordance with Clinical and Laboratory Standards Institute (CLSI) guidelines for screening of multidrug resistant isolates.

Results
The most frequent infections associated with *K. oxytoca* isolated from urine 28 (87.5%), followed by sputum 2 (6.2%), wounds 2(6.2%). Out of 32 K. oxytoca 17(53.12 %) isolates were classified as MDR with high-level resistance to β-lactams, aminoglycosides.

Conclusion:
In our study, a wide range of MDR *K. oxytoca* recommend the need to implement effective strategies to prevent and control the prevalence of antibiotic-resistant infections.

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The Frequency and risk factors of Human T-Cell Lymphotropic Virus Type I (HTLV-I) Among Blood Donors in Khorasan Razavi, Iran, From 2002 to 2013

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ARTICLEINFO

Poster

Key words:
Blood donors, HTLV-I, Iran, Khorasan, Transfusion.

ABSTRACT

Introduction:
Mashhad, a city in Khorasan Razavi province, Iran is one of the endemic area for human T-cell lymphotropic virus (HTLV-I) infection. Evaluating epidemiological aspects of HTLV-I would help to control the frequency of the virus. The aim of the present study was to investigate the changes in the epidemiology of HTLV-I infection among blood donors in Mashhad from 2002 to 2013.

Materials and Methods
Patient records of positive blood donors for HTLV-I from different blood banks of Mashhad were collected from 2003 to 2013. These data were first entered into paper versions and then analyzed by statistical software of SPSS. These confidential papers belonged to the donors whose enzyme-linked immunoabsorbent assay (ELISA) and Western blot (WB) results were both positive.

Results
Out of 983000 donation 2921 cases were positive. The highest and lowest frequency of carriers was 0.451% and 0.098%, respectively. Considering different risk factors, the most relevant factor was related to marital status (85.2%) and the lowest was related to the history of acupuncture (%0.3).

Conclusion
Considering the importance of HTLV-I in Mashhad it was found that a combination of different factors take part in HTLV-I reduction.

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Seroepidemiological Study of Toxoplasma Infection in Pregnant Women Referred to the Health Centers Using ELISA in the North Khorasan Province, Iran

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ARTICLEINFO

Poster

Key words:
Iran, Pregnant women, Toxoplasmosis, Risk factors.

ABSTRACT

Introduction:
Congenital toxoplasmosis is a disease with severe clinical manifestations in newborns so screening of pregnant women is crucial. This study was aimed at evaluating the latest status of toxoplasmosis in pregnant women and its respective risk factors in the northeast of Iran.

Materials and Methods:
Blood samples were taken from the participants . Anti-*Toxoplasma* IgG and IgM were assessed in serum samples using ELISA method. Moreover, a questionnaire about toxoplasmosis- related risk factors and other information was completed by each participant.

Results:
Of the 350 pregnant women studied, 110 (31.42%) were positive for IgG and 12 (3.42%) for IgM. The IgM-positive subjects were also positive for IgG. Age of pregnancy, residence area, contact with cat, degree of cooking meat, unwashed raw vegetable or fruit consumption, raw milk consumption, and history of miscarriage were statistically significant risk factors in IgG-positive subjects.

Conclusion:
The new cases of toxoplasmosis are being occurring in pregnant women in the region under the study and therefore these pregnancies are uncertain.

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Co- infectious Cytomegalovirus and Pneumocystis Jiroveci Pneumonia in a Polyarteritis Nodosa Patient: A Case Report

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ARTICLEINFO

Poster

Key words:
Cytomegalovirus, Pneumocystis jiroveci , Pneumonia, Polyarteritis nodosa.

ABSTRACT

Introduction:
Our report discusses a patient diagnosed with PAN since 3 years ago. He presented with fever, chills and nonproductive cough. He was a long time receiver of immunosuppressant drugs for his underlying condition. Upon examination he was febrile, had cushingoid appearance and cackles in both lungs. Lung CT scan showed opacities in the upper lobe of right lung and multiple bilateral nodules and ground glass opacity along with mild thickening of pleura. Bronchoscopy was ordered to asses PCP, and without hesitation empirical therapy was started. However, his clinical condition did not improve as expected. At this time, suspecting another infection at play, PCR for BAL specimen was ordered for CMV. After receiving the result of BAL analysis, our suspicion was confirmed for both PCP and CMV pneumonia. CMV is an important opportunistic infection in immunocompromised individuals.
This case highlights this importance in immunocompromising conditions. In this setting, presence of respiratory signs and symptoms point out to PCP as the first differential diagnosis; but at the same time it's crucial for clinicians to consider the possibility of CMV as a co-infective agent.

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The Antibacterial Effectiveness of Three Different Methods for Cleaning Hawley and Essix Retainers

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ARTICLEINFO

Poster

Key words:
Chlorhexidine, Essix,Hawley.

ABSTRACT

Introduction:
The aim of the present study was to evaluate the antibacterial effectiveness of three different methods for cleaning Hawley and Essix .

Materials and Methods:
Thirty patients who were candidates for receiving orthodontic retainers were enrolled and were divided into two groups: Hawley and Essix. Three cleaning protocols were assessed. 1: The patients were instructed to clean their retainer using their received toothbrush and toothpaste 3 times a day. 2: The patients cleaned their retainer the same as protocol 1+ spaying the retainer with 0.12% chlorhexidine for 30 minutes every night. 3: The patients cleaned their retainer the same as protocol 1+ soaking their retainer in distilled white vinegar (50%) for 15 minutes every night. Each protocol was applied for 2 weeks, and there was a 2-week wash-out interval between the protocols.

Results:
A significant difference between the Hawley and Essix retainer groups was found when the patients used protocol 2 for cleaning the retainers. For each type of retainer, there was not a significant difference between the three methods of cleaning.

Conclusion:
Chlorhexidine spray or soaking in vinegar following brushing of the retainer is equally effective as brushing.

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Nurses' Knowledge, Behaviour and Compliance Concerning Hand Hygiene in Nursing Homes: A Cross-Sectional Mixed-Methods Study

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ARTICLEINFO

Poster

Key words:
Hand hygiene, Infection prevention, Nursing homes, Nurses role, Nursing manager, Nursing, Patient safety.

ABSTRACT

Introduction:
The nursing home setting differs from other healthcare environments in individual and organisational factors attitude to improve hand hygiene and it is therefore difficult to research the influential factors to improve hand hygiene. We aim to explore these influences of individual and organizational factors of hand hygiene in nursing home staff, with a particular focus on the function of role modelling by nursing managers.

Materials and Methods:
We conducted a mixed-methods study surveying 200 nurses and interviewing 50 nursing managers from nursing homes in Iran.

Results:
Ninty-three percent of nurses and nursing managers held the knowledge of effective hand hygiene procedures. Hygiene standards and equipment were all generally available but compliance to standards also depended upon availability in the immediate work area and role modelling. Despite a general awareness of the impact of leadership on staff behaviour, not all nursing managers fully appreciated the impact of their own consistent role modelling regarding hand hygiene behaviours.

Conclusion:
These results suggest that improving hand hygiene should focus on strategies that facilitate the provision of hand disinfectant materials in the immediate work area of nurses. In addition, nursing managers should be aware of the impact of their role model function and they should implement this in daily practice.

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Association of Interleukin-28B Gene Polymorphisms with Hepatitis B Chronic and Hepatitis C Infection in Iranian Patients

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ARTICLEINFO

Poster

Key words:
Genetic polymorphisms, Hepatitis B Chronic, Hepatitis C, Patients, Interleukin-28, Iran.

ABSTRACT

Introduction:
Hepatitis virus is one of the major causes of viral chronic liver infections. The immune responses to HBV/HCV are responsible for both viral clearances during acute infection and Hepatitis infection. Studies have shown that single nucleotide polymorphism in IL-28B gene might be related to HBC/HCV infection susceptibility by increasing liver inflammation and viral load.

Materials and Methods:
The patients were 64 HBc antibody positive and 49 HCV Antigen positive who were referred to clinical microbiology research center and the control group were 21 healthy people. IL-28B gene polymorphism (rs8099917 G/T) was determined by a polymerase chain reaction restricted fragment length polymorphism.

Results:
From 64 HBc antibody positive patients, 56 (87.5%) were positive for HBs antigen. IL-28 (rs80) TT and GT genotypes were more frequent in HBC patients in comparison with the control group. There was no statistically significant association between the frequencies of IL-28B alleles in the patients and the normal population. TT genotype allele frequencies in married patients were higher than those single patients. 21 of 49 were HCV Ab positive and the frequency of TT genotype was significantly higher in the patients group.

Conclusion:
This study indicates that IL-28B TT and GT genotypes may increase susceptibility to HBC infection.

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A Case Report of Multisystem Inflammatory Syndrome in Children (MIS-C)

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ARTICLEINFO

Poster

Key words:
COVID-19, Multisystem inflammatory syndrome in children (MIS-C), Remdesivir.

ABSTRACT

Introduction:
Multisystem inflammatory syndrome in children (MIS-C) have described a presentation of acute illness accompanied by a hyperinflammatory syndrome, leading to multiorgan failure and shock.

Materials and Methods:
A 31-month-old girl referred to the emergency department of Akbar Hospital in Mashhad with complication of generalized rash and fever. Skin lesions were visible as generalized erythematous patches .she had tachycardia but no evidence of respiratory distress

Results:
In laboratory tests there was a lymphopenia and high inflammatory factors(CRP: 146 mg/dl ,D-Dimer: 6129 ng/ml). PCR COVID-19 (nasopharynx) was positive and SARS-cov-2(covid19) Ab-IgM was reported high. In HR chest CT scan evidence of several consolidations was seen in lungs.2 doses of IVIG(1 gr/kg) were infused and due to non-response to this treatment high-dose corticosteroid (20mg/kg for 3 days)was prescribed. Remedsivir was started for her by control of kidneys function. After 48 hours of hospitalization, the patient underwent fluid therapy and treatment with epinephrine due to hypotension and was transferred to PICU. There, she was intubated and connected to ventilator. she also received broad-spectrum antibiotics, anticoagulants, and vitamin C. she was extubated after 9 days and discharged in good general condition.

Conclusion;
In COVID-19 pandemic, each child with a fever >3 days should be carefully screened for MIS-C.

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Antifungal Effects of Silver Nanoparticles Synthesized by Plant Extract of Salvia Macrosiphon on Candida Species Isolated from Vulvovaginal Candidiasis

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ARTICLEINFO

Poster

Key words:
Antifungal activity, Candida vaginitis, Salvia macrosiphon, Silver nanoparticles.

ABSTRACT

Introduction:
Following bacterial vaginosis, Candida infection has been suggested as the second factor causing fungal vaginitis. This study designed to identify Candida spp.in patients with Candida vaginitis and to determine their sensitivity to silver nanoparticles synthesized by Salvia macrosiphon extract.

Materials and Methods:
Fifty colonies of candida isolates which previously obtained from patients with candida vaginitis were selected. To identify Candida spp. RFLP-PCR method was carried out. Finally, sensitivity of Candida species to those nanoparticles produced in S. macrosiphon extract was evaluated by broth micro dilution method according to CLSI-M27A3 protocol.

Results:
Out of 50 Candida species, C. albicans with 32 cases (64%) was the most common Candida species, followed by C. parapsilosis 12 (24%), C. krusei 3 (6%), C. glabrata 2 (4%), and C. kefyr 1 (2%) respectively. C. albicans strains with the MIC 90 = 0.38 µg/mL showed higher resistance than non- albicans Candida species with MIC 90 = 0.19 against silver nanoparticles synthesized by S. macrosiphon extract and the extract alone had no inhibitory effect in any of the dilutions tested.

Conclusion:
C. albicans and C. parapsilosis are the most common species involved in vaginal candidiasis. C. albicans is a more resistant species and non-albicans Candida species are more sensitive to silver nanoparticles.

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Investigating the Relationship Between Knowledge and Attitude with Home Quarantine Behavior in COVID- 19

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ARTICLEINFO

Poster

Key words:
Attitude,COVID-19, knowledge, Practice.

ABSTRACT

Introduction:
Basic hygiene principles and measures in public health crisis are vitally important for developing effective control measures.this study aimed to identify the current status of knowledge, attitude and practice regarding COVID-19 pandemic among residents of Suburbs of Iran to detect related associated sociodemographic variables and preventive behaviors.

Materials and Methods:
In this cross-sectional study, simple random sampling method and a researcher-made questionnaire consists of 20 questions, (CVR=0/593 , CVI=0/885). the scores were calculated liner regrration and ANOVA were used for statistical analysis.

Results:
In this study 238 questionnaires was completed; mean age 37.4 and standard deviation of 16.1 . seventy-two percent of participants had very good knowledge but 34.6% had good attitude and 24.6% had acceptable performance, 93.4% of them followed social distance, 36.8% washed their hands after each touch, 13.6% before meals, 16.2% before touching eyes and mouth, 58.2% obtained their information from television. Based on ANOVA and liner model, there was a positive relationship between knowledge and attitude and gender with behavior, which was the most important relationship between attitude and behavior.

Conclusion:
In our study the association was seen between higher attitudes with higher practice. Further implantation and encouragement from the government is required for the transforming of these well-adjusted attitudes into suitable practice.

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Design and Implementation of Intervention Based on PRECEDE-Proceed on Brucellosis Preventive Behaviors Among Stockbreeders and Their Family Members

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ARTICLEINFO

Poster

Key words:
Behavior, Brucellosis, Health education, Precede-Proceed model.

ABSTRACT

Introduction:
Brucellosis is one of the common diseases between humans and animals According to WHO, brucellosis is one of the 7 neglected zoonotic diseases and a major challenging issue for public health.

Materials and Methods:
A questionnaire was designed based on the PRECEDE-PROCEED model using inductive-deductive approach .In the next stage was referring to the health house of each village samples (140 rural farmers and their family members). Then, the educational intervention was carried out) with emphasis on the ecological and educational phase and the organizational intervention was carried out (with emphasis on the management and political phase and with the participation of related departments and other key people for the experimental group and the subjects were followed for 6 months.

Results:
Questionnaire on Brucellosis Prevention Behaviors showed that the mean (SD) scores of enabling factors, There was also a statistically significant difference between the men and women in the mean scores of the reinforcing (P=0.037) and enabling factors (P=0.004).

Conclusion:
The Planning and implementing of interventions based on PRECEDE-PROCEED framework could promote brucellosis preventive behaviors among traditional ranchers.

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Early Burn Dressing Change: A Strategy to Reduce Anxiety and Control Infection in Burn Patients: A Clinical Trial Study

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ARTICLEINFO

Poster

Key words:
Anxiety, Burns, Infection.

ABSTRACT

Introduction:
Infection in patients with burn injuries is important in that their immunity. High anxiety is associated with hypersensitivity to infectious diseases and reduced wound healing.

Materials and Methods:
In the intervention group, the dressing of the skin graft and the skin donor was changed one day and in the control group three days after surgery. Demographic questionnaire and burn pain anxiety questionnaire (BSPAS) were used to collect data. Wound culture was used to evaluate the extent of infection.

Results:
The percentage of burns in the intervention group was 12.1% and in the control group was 14.5%. The level of anxiety was in the intervention group (33.6 ± 11.3) which was significantly reduced compared to the control group (46.8 ± 11.2). The results showed that the frequency distribution of culture results was different in the intervention and control groups and 7.8% of the cultures sent from the skin graft and skin donor site were positive in the control group; If none of the results of the sent cultures were reported in the positive intervention group (P= 0.03).

Conclusion:
Early replacement of skin grafts and skin donors reduces anxiety and strengthens the immune response to burn wounds, thereby reducing infection in patients with burn wounds.

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Genetic Variation of *Giardia Duodenalis* Species Isolates in Human by Using B-Giardin Gene iIn Northeast of Iran

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ARTICLEINFO

Poster

Key words:
Assemblage, β-giardin, Giardia duodenalis, Iran, Phylogenetic analysis.

ABSTRACT

Introduction:
Giardia duodenalis is the common human protozoa which has highly diverse genetic assemblages. There is no available study on the diversity of Giardia sub-assemblages and multi-locus genotypes infecting individuals living in Mashhad. The objective of this study was to determine assemblages and sub-assemblages of *Giardia duodenalis* human isolates, at Mashhad, northeastern Iran.

Materials and Methods:
In this cross- sectional study, 15 DNA samples of Giardia spp., directly isolated from stool of symptomatic and asymptomatic individuals were analyzed. PCR assays performed on the basis of DNA sequences of β-giardin gene. Neighbor joining (NJ) analysis and genetic distance within and between assemblages was performed by MEGA X program.

Results
Three assemblages A (Sub-assemblages A2 and A3) and 10 assemblages B (Sub-assemblages of B2 and B3) obtained. Two out of 15 β-giardin gene sequences remained unclear. Assemblage B was detected in 9 patients with clinical symptoms (P=0.003).

Conclusion:
In addition, a phylogenetic analysis was carried out based on DNA sequences obtained from these Giardia and those available in GenBank. Assemblage B is associated with clinical symptoms alongside higher prevalence in Khorasan- e- Razavi province, northeastern Iran.

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Evaluation of Nosocomial Infections in Hospitals Under the Auspices of Mashhad University of Medical Sciences in 1399

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ARTICLEINFO

Poster

Key words:
Incidence, Mashhad, Nosocomial infection.

ABSTRACT

Introduction:
Nosocomial infection is an infection that occurs after admission to the hospital (48 or 72 hours later) or during a specific period after discharge and does not exist at the time of admission and in the period It should not be hidden. The study was to evaluate the status of nosocomial infections in hospitals under the auspices of Mashhad University of Medical Sciences in 1399.

Materials and Methods:
This is a descriptive-retrospective study in which all patients with nosocomial infections in the host hospitals were included in the study and analyzed.

Results:
In 1399, out of 643400 patients admitted to these hospitals, 10599 people had nosocomial infections with an incidence of 1.64. The incidence of infection was 51.2% in men and 48.8% in women. Older age group (65 years and older) with 38.5% have the highest incidence. The incidence of office infections was 25% higher than other infections. The highest incidence of infections was reported in the internal ICU with 26.25%, followed by the general ICU with 18.83% and burns with 8.33%.

Conclusion:
According to the studies, the most important way to reduce nosocomial infections is continuous training on hand washing and the use of personal protective equipment by personnel.

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The Effect of Intervention Based on the Theory of Planned Behavior on the Intention to Observe Hand Hygiene in Non-Clinical Staff of Mashhad University of Medical Sciences

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ARTICLEINFO

Poster

Key words:
Hand hygiene, Planned behavior theory, Staff.

ABSTRACT

Introduction:
One of the most effective and costly ways to prevent and control infections is to observe hand hygiene. This study aimed to determine the effect of training based on the theory of planned behavior on the intention to observe hand hygiene in non-clinical staff.

Materials and Methods:
This quasi-experimental one-group study was conducted in 1398 with the participation of 43 non-clinical staff of Mashhad University of Medical Sciences. Participants were selected by available sampling method. The data collection tool was a two-part questionnaire including demographic information and questions based on the structures of the theory of planned behavior (attitude, behavioral control, perceived norms and intention to observe hand hygiene). The educational intervention was carried out by holding a one-day workshop for 5 hours. Data were analyzed before and after the intervention by paired t-test using SPSS software version 22.

Results:
The mean age of participants was 38.66±8.65 years. Before and after the intervention, the mean score of attitude (P=0.003), behavioral control (P=0.005), subjective norms and intention to observe hand hygiene (P<0.001) were significantly different.

Conclusion:
The use of educational strategies based on the theory of planned behavior can be effective in promoting people's intention to observe hand hygiene.

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Successful Treatment of Respiratory Viral Infection Complicated by Invasive Pulmonary Aspergillosis in Liver Transplant Patient

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ARTICLEINFO

Poster

Key words:
Pulmonary aspergillosis, Respiratory viral infections, Liver transplant.

ABSTRACT

Introduction:
Data regarding invasive pulmonary aspergillosis (IPA) following respiratory viral infections (RVIs) in patients with leukemia and/or hematopoietic stem cell transplantation (LHSCT and solid organ transplant (SOT) are limited.

Materials and Methods:
Here in we report a 36-year-old female underwent a liver transplant due to Autoimmune hepatitis Two weeks after transplant, in February, she presented with dry cough, pleuritic chest pain, increasing shortness of breath, chills, fever. Her maintenance immunosuppressive medications included mycophenolate , prednisone and tacrolimus . Her antimicrobial prophylaxis consisted Trimethoprim-sulfamethoxazole (TMP-SMX) and Valcyte . Exam findings on presentation were notable for ill appearance, with Fever ,Tachypnea Tachycardic and hypoxia with a room air oxygen saturationof 89%.

Results:
Nasal swab was obtained and submitted for multiplex panel respiratory virus polymerase chain reaction testing. The following day it was reported as positive for PIV. Bronchoscopy were done and BAL was positive for PIV & Aspergillosis pcr &GM. Oral Ribavirin ,IVIG (500mg/kg IV QOD x 5doses) and Voriconazole were started.And we clinical and imaging response after end of treatment.

Conclusion:
Post-RVI IPA was defined as sputum, BAL (or bronchial wash), or tissue biopsy specimen cultures positive for Aspergillus species identified within 6 weeks after RVI.

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X-Linked Agammaglobulinaemia with COVID-19 and Pneumocystis Carinii Pneumonia-An Unusual Coincidence?

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ARTICLEINFO

Poster

Key words:
COVID- 19, Pneumocystis jiroveci , Pneumonia.

ABSTRACT

Introduction:
Pneumocystis jiroveci pneumonia is an opportunistic pulmonary infection usually associated with T-cell defects.

Materials and Methods:
A 20 years old patient with X-linked agammaglobulinaemia (XLA), presented in Covid19 outbreak due to respiratory failure. Labratory data revealed sever Lymphopenia and COVID-19 positive PCR, and lung involvement were compatible with sever COVID- 19. IVIG, Remdisivir, IFN-b,corticosteroid and broad spectrum antibiotics were started,after 10 days he was discharged with good cnondition. After 3-days he came back to hospital with dyspnea and SPo2: 73%. Chest CT were done and revealed Diffuse GGO. due to sever lymphopenia and high level LDH and compatible Lung CT with PCP, TMP -SMX with 15mg/kg were started.

Results:
We had dramatic response after 48 hour TMP-SMX treatment,and discharged him after 1week with oral TMP-SMX. We could not confirmed PCP in this case with bronchoscopy and BAL due to COVID-19pandemic.

Conclusion:
Herein the case of a 20-year-old patient, affected by X-linked agammaglobulinaemia (XLA), who developed severe pneumonia from COVID-19and Pneumocystis jiroveci (PCP), is reported. The XLA patient developed PCP during therapy with steroids and cyclosporine.

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Blood Culture and Antimicrobial Susceptibility Pattern of Bacteria and Fungi Isolated from Febrile Neutropenic Patients Treated with Chemotherapy at Taleghani Hospital, Tehran

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ARTICLEINFO

Poster

Key words:
Blood culture, Chemotherapy, Febrile neutropenia, Fungemia.

ABSTRACT

Introduction:
Patients with hematologic malignancies are predisposed to severe infections, particularly during treatment with chemotherapeutics. The resulting neutropenia is a major cause of morbidity and mortality in these patients. The aim of this study was to determine the drug susceptibility pattern of the pathogens causing bacteraemia and fungemia in patients who have developed febrile neutropenia after chemotherapy.

Materials and Methods:
A total of 95 patients with suspected or proven malignancy (50 patients) were admitted to the adult haematology ward at Taleghani Hospital in Tehran. Blood samples were inoculated into the bottles of Bact/Alert blood culture system and sent to Payvand's clinical and special laboratory immediately.

Results:
Among 50 patients with approved malignancy, Acute Lymphoblastic Leukaemia (ALL) and Acute Myeloid Leukaemia (AML) were the most common underlying diseases. This study showed, 20% (n: 10) of febrile neutropenic episodes established positive blood culture. Of them, 3 were gram-negative (30%) and 5 were-gram-positive bacteria (50%) and 2 patients (20%) showed fungemia with Fusarium spp.

Conclusion:
It is crucial to know about the likely pathogens and their local antibiotic and antifungal sensitivity patterns. Such local findings will show if any modifications to treatment guidelines are necessary.

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Detection of Morganella Morganii in a Patient with Diabetes Mellitus

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ARTICLEINFO

Poster

Key words:
Diabetes mellitus, Foot infection, Morganella morganii.

ABSTRACT

Introduction:
Morganella morganii is a Gram-negative bacillus that resides the gastrointestinal tract. It is a rare bacterial isolated in diabetic ulcer and has only been reported in a few patients previously.

Materials and Methods:
In this report, A 65-year-old woman with diabetes mellitus and hypertension for several years and Cerebrovascular accident (CVA) in history. The patient had complaints of elevated body temperature, malaise and pain in right foot. Laboratory investigations revealed the following values: haemoglobin 10.6 g/l, haematocrit 32.7%, leucocyte count 18,600 cells/m3 (96.1% polymorpho-nuclear cells and 3.1% lymphocytes), plate-lets 607,000 cells/m3, blood sugar level 623 mg/dl (normal value, 80–110 mg/ dl), and C-reactive protein quality (++) values were higher than normal. The sample referred to laboratory for bacteriological examination. The sample cultured on blood agar, MacConkey agar and chocolate agar. Bacterial identification was performed base on imvic, kligler iron agar, MR-VP and urea agar. Antibiotic susceptibility testing was performed by the disk diffusion method.

Results:
The bacteria was Morganella morganii. Antibiotic susceptibility testing was sensitive to cefepime, pipracillin tazobactam, amikacin, ceftriaxone, gentamycin, trimethoprim sulfamethoxazole, meropenem and intermediate to ampicillin sulbactam, ciprofloxacin, Imipenem.

Conclusion:
This case indicates that Morganella morganii may be considered as a possible cause of diabetic foot infections.

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Sensitivity and Resistant of the Micoroorganisms Responsible for Neonatal Sepsis to Antibiotics

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ARTICLEINFO

Poster

Key words:
Antibiotics, Antibiogram, Grame negative microorganism, Neonates, Sepsis.

ABSTRACT

Introduction:
Sepsis is one of the most important neonatal diseases and requires early appropriate treatment. The present study was conducted to determine the resistance and sensitivity to antibiotics in neonates with definitive sepsis who were admitted in NICU.

***Materials and Methods*:**
This cross-sectional study was performed on 280 neonates with definitive sepsis during 2009-2019. Identification of microorganism and antibiogram test were performed according to the standard microbiological method. A researcher-made questionnaire inculding the charactristic of neonates, types of micro-organisms (gram positive or negative) in neonatal ward, sensitivity and resistance to common micro-organism in neonatal sepsis was used as the data collection tool.

Results:
This cross-sectional study was performed on 280 neonates with definitive sepsis during 2009-2019. Identification of microorganism and antibiogram test were performed according to the standard microbiological method. A researcher-made questionnaire inculding the charactristic of neonates, sensitivity and resistance to common micro-organism in neonatal sepsis was used as the data collection tool.

Conclusion:
According to the results of present study, high-sensitivity drugs for treatment of definite neonatal sepsis include vancomycin, piperacillin, tazobactam, and meropenem for gram-negatives, and doxycycline, piperacillin, and tobramycin for gram-positive microorganisms.

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The Effect of Vaginal Probiotic Capsule on Increasing the time of Tear Rupture to Delivery and Maternal and Neonatal Complications

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ARTICLEINFO

Poster

Key words:
Fetal complication, PPROM, Vaginal probiotic capsule.

ABSTRACT

Introduction:
Antibiotic administration during expectant management causes normal vaginal flora disturbance, growth of virulent microorganisms, and reducing latency period. this study has been designed to evaluate the therapeutic effects of vaginal probiotic capsule administering to maintain vaginal microbial flora, and reduce the growth of virulent microorganisms.

Materials and Methods:
This randomized clinical trial was conducted on pregnant women with a singleton live birth who had premature prelabor rupture of the membranes (PPROM) and their gestational age was 24-32 weeks at the time of PROM were included in the study.

Results:
First (P=0.6) and fifth (P=0.55) minute Apgar scores were not significantly different in the two groups. The two groups were no different in terms of smoking, delivery route, neonatal gender, and the indication for cesarean section, blood culture, duration of NICU stay and infant death in the first week, the first vaginal bleeding, and the methods of diagnosis of PROM and the cause of that end pregnancy. The duration of NICU stay shows that significantly higher in control group than the intervention group.

Conclusion:
Use of vaginal probiotic capsules did not affect the outcomes, either maternal nor neonatal complications. However, the use of these capsules may increase the duration of admission of newborns in NICU.

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Molecular Characterization of Fungal Colonization on the Provox™ Tracheoesophageal Voice Prosthesis in Totall Laryngectomized Patients

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ARTICLEINFO

Poster

Key words:
Antifungal susceptibility test, Fungal colonization, Minimum inhibitory concentration, White vinegar, Total laryngectomy, Voice prostheses.

ABSTRACT

Introduction:
Successful voice rehabilitation is critical for the patients' voice communication after surgery. Tracheoesophageal voice prostheses (TVPs) have been the gold standard in rehabilitation. Fungal colonization shortens the device's lifetime and leads to prosthesis dysfunction, leakage, and subsequent respiratory infection unless replaced with a new one immediately. Therefore, in the current study, we aimed to investigate the fungal colonization patterns and to propose prophylactic measures that shall increase the longevity of prosthesis to decrease patients' discomfort and health cost.

Materials and Methods:
Fungal colonization patterns were assessed using DNA sequencing techniques. Furthermore, the susceptibility to fluconazole, amphotericin B, nystatin, and white vinegar was evaluated according to the Clinical and Laboratory Standards Institute (CLSI) guidelines.

Results:
Resident fungal species from the upper airways colonized all the 66 TVPs (100%). Diabetes (31%) and smoking (98%) were the predominant underlying disease and predisposing factor, respectively. Among the 79 fungal agents isolated from the 66 TVPs, Candida glabrata (n=25, 31.7%) was the most common. A significant reduction in MIC values was observed for white vinegar ($P<0.05$).

Conclusion:
White vinegar at a very low concentration could decrease the amount of fungal colonization on TVPs without any adverse effects; its wide accessibility and affordability ensure a decrease in the overall health cost.

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Effect of Effort-Reward Imbalance and Burnout on Infection Control Among Iranian Nurses

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ARTICLEINFO

Poster

Key words:
Burnout, Nursing roles, Infection control, Occupational health, Quality assurance.

ABSTRACT

Introduction:
Nurses are frequently exposed to transmissible infections, yet adherence to infection control measures is suboptimal. There has been inadequate research into how the psychosocial work environment affects compliance with infection control measures, especially in low- and middle-income countries. To examine the association between effort-reward imbalance, burnout and adherence to infection control measures among nurses in Iran.

Materials and Methods:
A cross-sectional study linking psychosocial work environment indicators to infection control adherence. The study was conducted among 450 nurses in four Iranian hospitals. Self-administered questionnaires assessed demographic variables, perceived infection risk, effort-reward imbalance, burnout and infection control adherence.

Results:
Increased effort-reward imbalance was found to be a unique incremental predictor of exposure to burnout, and burnout was a negative unique incremental predictor of nurses' self-reported adherence with infection control measures. Results suggest an effort-reward imbalance-burnout continuum, which, at higher levels, contributes to reduce adherence to infection control. The government of Iran has made large efforts to improve universal access to health care, yet this study suggests that workplace demands on nurses remain problematic.

Conclusion;
This study highlights the contribution of effort-reward-imbalance-burnout continuum to the chain of infection by decreased adherence to infection control of nurses.

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The Role of Procalcitonin in the Diagnosis of Aspergillosis in Pediatric Hematologic Disorders

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ARTICLEINFO

Poster

Key words:
Aspergillosis, CRP, ESR, Hematologic disorder, Lactate dehydrogenase, Procalcitonin, Pediatric, White blood cell.

ABSTRACT

Introduction:
The study aimed to investigate the value of serum procalcitonin and other inflammatory factors for the diagnosis of invasive aspergillosis in pediatric patients with hematologic disorders.

Materials and Methods:
Pediatric patients with hematologic disorders (aged between 1and 14 years) and confirmed invasive aspergillosis were included in this study. The respective sera were evaluated for procalcitonin by ELISA Kits. Demographic characteristics, lactate dehydrogenase (LDH), C reactive protein (CRP), erythrocyte sedimentation rate (ESR), and white blood cell (WBC) count values were extracted from the patients' files.

Results:
Twenty-eight patients were entered into this study. The mean values of procalcitonin was 452.5 pg/ml (0.453 ng/ml), range 60.4-1183 pg/ml. The mean value of LDH, WBC count, ESR, and CRP were 1652 U/L, 10125 cells/ml, 45 mm/h, and 59 mg/l, respectively. The use of amphotericin B presented the lowest procalcitonin level. Six patients died. Although there was no significant relationship between procalcitonin level, LDH, WBC count, ESR, CRP values and death, but in pass away patients, these values were higher.

Conclusion:
The use of procalcitonin combined with routine lab procedures (ESR, WBC count, and CRP) can be a useful biomarker for the diagnosis of invasive aspergillosis and the outcome of the patients.

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Study of Deaths Due to Nosocomial Infections in Hospitals Under the Auspices of Mashhad University of Medical Sciences in 1399

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ARTICLEINFO

Poster

Key words:
Death, INIS, Mashhad.

ABSTRACT

Introduction:
It has been shown that nosocomial infections annually lead to the death of 19,000 people and indirectly to the death of 58,000 people. The aim of this study was to investigate the deaths due to nosocomial infections in hospitals under the auspices of Mashhad University of Medical Sciences in 1399.

Materials and Methods:
This is a descriptive-retrospective study in which all deaths due to nosocomial infections in the host hospitals were included in the study and analyzed.

Results:
In 1399, out of 10599 reported hospital infections, 1545 cases were fatal. 48.7% of deaths were in women and 51.3% in men. Most deaths were in the age group of 65 years and older (elderly). With 55%. VAE infections with 36.6% have the highest number of deaths. Most deaths were reported from the general ICU (448 cases), surgical ICU (416 cases) and internal ICU (278 cases), respectively.

Conclusion:
The formation of the Committee for the Control of Nosocomial Infections and continuous monitoring of the work of the personnel regarding the use of personal protective equipment, hand washing and observance of standard precautions are very effective in reducing the cases of infection and death resulting from it.

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Maternal-Fetal and Neonatal Complications of Water-Birth Compared with Conventional Delivery

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ARTICLEINFO

Poster

Key words:
Infection, Neonatal, Water-birth.

ABSTRACT

Introduction:
Warm water is considered for decreasing labor pain but there are some doubts regarding the complications of water-birth.

Materials and Methods:
This clinical trial was conducted on 200 pregnant women during 2008 and 2009 in Omolbanin hospital. Delivery duration, cesarean rate, postpartum hemorrhage, maternal and neonatal infection during the first week after delivery, early neonatal Apgar scores, neonatal eye infection and the rate of NICU admission were compared between two groups. Finally, 88 women in conventional delivery group and 83 cases in water birth groups remained. Data were analyzed using statistical SPSS software (version 14), Kolmogorov-Smirnov, Chi-square and t-student tests.

Results:
Mean duration of first (P=0.344), second (P=0.372) and third (P=0.523) stages of labor were not statistically significant between two groups. Cesarean rate was significantly higher in conventional delivery group than water-birth group (P=0.018). First (P=0.026)and five (P≤0.001) minutes Apgar scores were significantly higher in water-birth group than conventional delivery group. No significant differences were observed between two groups in terms of other variables.

Conclusion:
Water birth does not increase neonatal infection and the rate of maternal and neonatal morbidity and can be used as a method to reduce labor pain and improve delivery duration process.

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Assessing the Level of Personal Protection Among Nurses

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ARTICLEINFO

Poster

Key words:
Hospital, Nurses, Personal protection.

ABSTRACT

Introduction:
Safety is defined as the degree of avoidance of danger and a relative care of dealing with dangers, and the use of safety and personal protective equipment plays an important role in reducing injuries to employees. The World Health Organization has provided recommendations for the rational use of personal protective equipment.

Materials and Methods
The present study is a cross-sectional descriptive study.The study population was all nurses working in the medical wards of Shahid Kamyab Hospital who were included in the study by census. Data were collected through a checklist monitoring the nurse's performance by the researcher in the face of a situation that requires personal protection.

Results:
Findings from the study showed that 85% of nurses wore masks, 97% masks, 75% glasses and 95% gloves in situations that require personal protection. Nurses used masks in the face of unhealthy skin and mucous membranes 75%,contact with the patient's excretory secretions 96%, probability of exposure to the patient's respiratory secretions 98%,patient care 100% isolated.

Conclusion:
The results of this study can lead to corrective measures to improve the use of personal protection and reduce the risk of infection in patients and staff, and thus reduce costs and reduce the length of hospital stay and treatment of colleague.

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The Effect of Evaluation with the Mobile Application on the Score of Indicators of Bed Sore in one Year in Imam Reza (AS) Hospital in Mashhad

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ARTICLEINFO

Poster

Key words:
Accreditation, Bedsore, Hospital.

ABSTRACT

Introduction:
Bedsore (pressure ulcers) is known as the third most costly diseases after cancer and cardiovascular illnesses. In this study we evaluated the effect of continuous surveillance of related factors of bedsores with use of mobile application in different wards of Imam Reza hospital in Mashhad-Iran.

Materials and Methods;
In this analytical discriptive and cross sectional study, we used a check list on the basis of national accreditation program components and we set up this on mobiles. We chose three performance indicators related to bedsores and analized data with SPSS software version 16.

Results:
Selected indicators were increased significantly in second 6 months of 1398 in relation to the first 6 months.The highest and lowest scores were related to registration and reporting of BRADEN scale lower than 12 and preventive care measures.The highest mean indicator scores belonged to intensive care units.

Conclusion;
It is recommended to consider effective factors on increasing care standards of bedsores in hospital and find proper solutions for them.

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Evaluation of Safety and Infection Control Standards in the Operating Room of Genaveh Hospitals

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ARTICLEINFO

Poster

Key words:
Genaveh, Infection control, Iran, Operating room.

ABSTRACT

Introduction:
This study was a cross-sectional descriptive study.Accreditation of hospitals was obtained by researchers by observation. Data were statistically analyzed by SPSS software.

Materials and Methods:
According to the findings obtained from the operating rooms of Genaveh hospitals, 80% of the condition in terms of physical space, 85% in terms of patient safety, 76% of staff safety, and 62% of infection control were reported.

Results:
Considering that the observance of more standards improves the performance of staff, it is suggested that the standards be adjusted according to the conditions and situation of hospitals. Require the promotion of hospitals based on compliance with standards, especially safety and infection control.

Conclusion:
According to the findings obtained from the operating rooms of Genaveh hospitals, 80% of the condition in terms of physical space, 85% in terms of patient safety, 76% of staff safety, and 62% of infection control were reported.

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Prevalence of Pneumonia Infections in Hospitals Affiliated to Mashhad University of Medical Sciences in 1399

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ARTICLEINFO

Poster

Key words:
Incidence, Mashhad, Respiratory infection.

ABSTRACT

Introduction:
Nosocomial pneumonia is the second most common nosocomial infection after urinary tract infection in the United States. About 86% of these pneumonias are due to ventilator. The aim of this study was to evaluate the status of respiratory infections in hospitals under the auspices of Mashhad University of Medical Sciences in 1399.

Materials and Methods:
This is a descriptive-retrospective study in which all patients with nosocomial infections in the host hospitals were included in the study and analyzed.

Results:
In 1399, out of 10599 patients admitted to these hospitals, 980 had respiratory infections with an incidence of 0.15. The incidence of infection was 60.4% in men and 39.6% in women. The older age group (65 years and older) with 47.5% have the highest incidence. The highest incidence of infection was reported in the internal ward with 313 cases. The number of deaths due to this type of infection was 567 (36.6% of deaths due to nosocomial infections).

Conclusion:
According to studies, the most important way to reduce nosocomial infections is continuous training on hand washing and the use of personal protective equipment by personnel.

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The Effect of Coronary Heart Disease on Vaccination Coverage of Children in Mashhad University of Medical Sciences in the First Six Months of 1399

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ARTICLEINFO

Poster

Key words:
Coverage, Mashhad,Vaccination.

ABSTRACT

Introduction:
Vaccination is a very important and valuable measure that can prevent many dangerous and costly infectious diseases at a small cost. The aim of this study was to investigate the effect of coronary heart disease on vaccination coverage of children in Mashhad General Medical University in the first six months of 1399.

Materials and Methods:
This is a descriptive-retrospective study in which data were entered and analyzed based on Form 105 immunization available in the portal of the Center for Disease Management.

Results:
Vaccination coverage in 1398 for OPV3, Panta3, MMR1 and MMR2 vaccines was between 99 to 100%. But in the first six months of 1999, it was 86% for the OPV3 and Panta3 vaccines, 87% for the MMR1 vaccine and 85% for the MMR2 vaccine. The target index of vaccination is at least 95%, and we are currently seeing a reduction of almost 10% in all vaccines.

Conclusion:
Given the importance of vaccinating children to prevent the spread of preventable diseases with the vaccine, the following should be considered to achieve this goal: establishment of clean centers and bases for vaccination, public awareness about the importance of vaccinating children and continuous follow-up by health care providers.

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Educability in Hand Hygiene: Comparing Knowledge and Attitude of Medical Students and Residents

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ARTICLEINFO

Poster

Key words:
Attitude, Education, Hand hygiene, Knowledge, Medical students.

ABSTRACT

Introduction:
Hand hygiene (HH) is considered the most important measure to reduce the healthcare associated infections. The main objective of this study was to evaluate the effect of an educational program on knowledge and attitude of medical students at different levels towards HH.

Materials and Methods:
Two groups of medical students including medical students and residents participated in this study in 2017. The Persian version of WHO questionnaire on HH knowledge and attitude were completed by each participant before the workshop, immediately and three months after the work shop about the importance of HH. Data were analyzed using SPSS.

Results:
A total of 277 medical students entered to the study and about 71% completed the study. The mean knowledge level of the residents was significantly higher than the externs at the beginning of the study ($p<0.0001$). There was a significant difference between pre-test and the immediate post-test scores on HH knowledge and attitude of all the attendants ($P<0.0001$). Although the late post-test scores were lower compared to the immediate post-test scores, they were still higher than the pre-test scores ($P<0.0001$).

Conclusion:
Training program advances the level of HH knowledge and attitude. Therefore, scheduling regular courses are recommended to maintain the knowledge and attitude levels among HCWs.

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Prevalence of Methicillin-resistant S. aureus (MRSA) Causing Bloodstream Infections in Cancer Patients from Southwest of Iran

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ARTICLEINFO

Poster

Key words:
Cancer patients, Hematological malignancies, MRSA.

ABSTRACT

Introduction:
Methicillin-resistant Staphylococcus aureus (MRSA) is a common both community-acquired as well as hospital-associated infections, with a high mortality rate. Patients with active cancer have a high risk of bloodstream infection (BSI) and MRSA infection due to immune suppression. The aim of this study to evaluate the frequency rate of Methicillin-resistant Staphylococcus aureus (MRSA) causing bloodstream infections (BSIs) in cancer patients referred to one of the major referral hospitals in Ahvaz city, southwest Iran.

Materials and Methods:
In this study, 1700 blood cultures were collected from 610 cancer patients suspected to have BSI from October 2016 to August 2017 referred to the Shafa cancer hospital, Ahvaz, southwest of Iran. The blood culture bottles were sub-cultured on routine microbiology culture media.The phenotypic detection of MRSA isolates identified using the cefoxitin disc method and further confirmation by polymerase chain reaction (PCR) amplification of the mecA gene.

Results:
The prevalence of BSI in cancer patients was 16.4% (100/610). Moreover, 10 (10%) S. aureus strains were isolated of which 5 isolates were methicillin-resistant. Of the 16 coagulase-negative staphylococci, 8 isolates were methicillin-resistant.

Conclusion:
Based on the results, surveillance, and antibiotic stewardship programs should be implemented for cancer patients to prevent the spread of more MRSA that have limited therapeutically choices.

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The Effect of Stewardship on Prescribing Antibiotics Vancomycin, Imipenem and Cefpime in Patients Admitted to Amir Al-Mo'menin Hospital in Genaveh

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ARTICLEINFO

Poster

Key words:
Antibiotics, Patients, Stewardship.

ABSTRACT

Introduction:
Increasing antibiotic resistance is one of the problems facing medical science, in this regard, this study was conducted.

Materials and Methods:
According to the protocol of the Deputy of Treatment, the amount of imipenem, vancomycin and cefpime administered in the first quarter of 1398 and the amount of administration in the second quarter of 1398 in all hospitalized patients were compared. Findings were analyzed using descriptive statistics and 22 SPSS software (P=0.005). The average number of occupied day beds was examined in two time periods.

Results:
The average dose of imipenem in the first quarter of 1398 was 542, which reached 335 in the second quarter. The average prescription of vancomycin in the first quarter of 1398 was 1060, which reached 762 in the second quarter. The average dose of cefpime in the first quarter of 1398 was 76, which reached 36 in the second quarter. The average number of beds per day in the first quarter of 1398 was 59. Which reached 53.6 in the second quarter and had a significant decrease.

Conclusion:
Stewardship implementation should be part of the mandatory planning of health managers.

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Effect of Amino Acid Substitution on Biological Activity of Cyanophlyctin-B And Brevinin-2R

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ARTICLEINFO

Poster

Key words:
Antimicrobial peptides, Antibacterial activity, Cyanophlyctin, Structural prediction.

ABSTRACT

Introduction:
Antimicrobial peptides (AMPs), as ancient immune components, are found in almost all types of living organisms. They are bioactive components with strong antibacterial, antiviral, and anti-tumor properties. In this study, we designed three sequences of antimicrobial peptides to study the effects of structural changes in biological activity compared with original peptides, cyanophlyctin β, and brevinin-2R.

Materials and Methods:
For antibacterial activity, two Gram-positive (Staphylococcus aureus and S. epidermidis) and two Gram-negative bacteria (Escherichia coli and Pseudomonas aeroginosa) were assayed. Hemolytic activity of peptides was also determined.

Results:
Unlike cyanophlyctin β and brevinin-2R, the synthesized peptide (brevinin-M1, brevinin-M2 and brevinin-M3) showed no considerable antibacterial properties. Hemolytic activity of these peptides was also ignorable even at very high concentrations of 2 mg/ml. However, after proteolytic digestion by trypsin, the peptides showed antibacterial activity comparable to their original template sequences.

Conclusion:
Structural prediction suggested that the motif sequence responsible for antibacterial activity may be re-exposed to bacterial cell membrane after proteolytic digestion. Also, findings showed that only a small change in primary sequence and therefore structure of peptides may result in a significant alteration in biological activity.

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Incidence and Outcome of Candidemia In Surgical NICU of Akbar Pediatric Hospital

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ARTICLEINFO

Poster

Key words:
Candidemia, Neonatal infection, Surgical NICU.

ABSTRACT

Introduction:
Neonatal fungal infections are a common problem in neonate that lead to severe morbidity and mortality. Risk factors of invasive candidasis in neonates are prematurity, complex gastrointestinal diseases, antiacid and surgery requirement, central venous line and use of broad spectrum antibiotics. We meet all of these problems together in surgical NICU of Akbar hospital.

Materials and Methods:
In this study, we included all neonates with candidemia in last two years in surgical NICU of AKBAR hospital.

Results:
There were 18 positive blood culture tests with candida from 707 infants who were admitted to hospital (2.54%). The mortality rate in candidemia group was significantly higher than neonates without candidemia (38.9% vs. 11.7% respectively). About the risk factors of candidemia, 81.3% had central vein catheter, 61.1% received H2-blocker or PPI, 38.9% received steroid, 55.6% had history of intubation. Episodes of hyperglycemia, apnea, bradicardia and resuscitation were 11.8%, 17.6%, 5.6% and 5.6% respectively. Length of hospitalization and length of hospitalization prior to positive blood culture result was 41.06 and 24.53 days respectively. Duration of antifungal therapy until negative blood culture result was 6.45± 3.44 days.

Conclusion:
Although the incidence of candidemia was 2.54%, mortality rate was three times higher than neonates without candidemia.

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Statistical and Mathematical Models for Predicting Covid-19 Outbreaks

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ARTICLEINFO

Poster

Key words:
COVID-19, Face mask, Mathematical model, Statistical models, Social distance.

ABSTRACT

Introduction:
COVID-19is a community-acquired infection which can spread in the human population of any origin and endanger the health of many groups in society. The respiratory droplet is one of the most common ways of transmitting the disease through people in the community. The aim was use of statistical and mathematical models to predict the prevalence of COVID-19 disease.

Materials and Methods:
Using search engines Scopus, Google Scholar, Pubmed, ISC, SID, Magiran, Irandoc, Doaj were done with time limit from 2019 to 2020.

Results:
Out of 33 articles reviewed, 18 articles were selected based on inclusion criteria. Mathematical models were reviewed in 10 articles (4 quarantines, 4 social distances, 2 masks) and statistical models were reviewed in 8 articles (2 Monte Carlo, 4 logistic regression, 2 Agent-based models). These studies mainly were about social distance, quarantine and use of face masks and face glasses.

Conclusion:
It seems that studies on non-pharmacological interventions such as quarantine, mask and social distance as well as effective factors of increasing lymphocytes in reducing coronary heart disease using logistic regression statistical models similar to Monte Carlo in the R software, SEIR dynamic model is more effective in the net logo simulation environment.

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Safety Assessment of Personnel with COVID-19 in Genaveh Hospitals in the First Six Months of 1399

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ARTICLEINFO

Poster

Key words:
Antibodies, COVID-19, Medical staff, Safety.

ABSTRACT

Introduction:
To reduce person-to-person transmission by reducing contact, especially with affected individuals. Unfortunately, in the meantime, the hospital staff was exposed to this disease.

Materials and Methods:
Data were obtained from two sections, which included completing a questionnaire CORONA, clinical symptoms, how the disease spread, the ward, length of hospital stay and quarantine period, re-infection CORONA, and laboratory tests. The data obtained by the researcher were statistically analyzed using SPSS software.

Results:
In this study 160 staff members had positive PCR tests, 58% of them are female and 42% male, 51% were directly affected by COVID-19 and are serving in the emergency department, and intensive care unit. The average age of infection is 27 years. High levels of IgM and IgG were reported in 68% of staff antibody tests. Four percent of positive staff already had positive PCR tests following the onset of new clinical signs, of which 4 reported zero antibody levels.

Conclusion:
It is suggested that continuous monitoring of personal protection and safety of medical staff be a priority in the programs of the Ministry of Health.

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Bacterial Profile and Antimicrobial Resistance of Urinary Tract Infections in Ghaem Teaching Hospital During Three Years

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ARTICLEINFO

Poster

Key words:
Antibacterial susceptibility pattern, Bacterial infections, Urinary tract infection.

ABSTRACT

Introduction:
Improper administration of antibiotics in a hospitalized urinary tract infection (UTI) leads to bacterial resistance and high medical costs. The aim of this study was to determine the prevalence and antibiotic resistance of bacteria for appropriate treatment of UTI.

Materials and Methods:
Samples of patients suspected to urinary tract infection were collected in Ghaem Hospital of Mashhad University, Medical Sciences during three years. Identification and antimicrobial susceptibility testing was performed by conventional methods and data were analyzed using WHONET software

Results:
Out of the 3568 positive cases of UTI, gram-negative bacilli were more frequent (77.41%). The most common photogenes were *Escherichia coli* (43.97%), *Klebsiella pneumonia* (15.3%), *Enterococcus faecalis (*15.27%) and *Pseudomonas aeruginosa* (7.8%). Among all gram-negative isolates highest resistance were related to ampicillin (86.2%), cefazolin (79%), piperacillin (78.2%), trimethoprim/sulfamethoxazole (71.3%) and highest susceptibility was related to colistin (84.1%), amikacin (74.8%), meropenem (73.2%). However, gram-positive isolates also were indicated resistance to azithromycin (84.5%), tetracycline (80.1%), erythromycin (79.9%).

Conclusion:
Knowledge of the current antibiotic resistance patterns of the major uropathogen is important in order to an appropriate empirical treatment.

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Prevalence of Chlamydia Trachomatis in First Void Urine Specimens of Women with Symptomatically Cervicitis in Ahvaz, Iran

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ARTICLEINFO

Poster

Key words:
Chlamydia trachomatis, FVU, IgM,PCR.

ABSTRACT

Introduction:
C. trachomatis is one of the most common cause of STDs such as urethritis in men and cervicitis in women. Many of the infected adolescents and young adults are reported as asymptomatic reservoirs of *C. trachomatis* and are unaware of their infections.

Materials and Methods:
The prevalence of *C. trachomatis* in FVU specimens of women with cervical infections and their IgM titers were investigated by PCR and serology, respectively.

Results:
In this study, from each woman participants one FVU sample and one blood sample was provided and overall 163 FVU and blood samples were collected from sexually active women (15-45 years) who had the symptomatic genital infections. Detection of *C. trachomatis* DNA was performed in FVU samples by PCR. Also, anti_*C. trachomatis* IgM antibody in the serum samples were recognized. Out of 163 FVU samples, 41(25.1%) cases were positive based on PCR technique. The anti *C. trachomatis* IgM was detected in 46 (28.2%) cases.

Conclusion:
There was a clear association between *C. trachomatis* infections with abortion, post coital bleeding and dyspareunia. Also, it seems both PCR and serology methods are appropriate for diagnosis of *C. trachomatis* infections.

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Effects of Dietary Honey and Ardeh Combination on Chemotherapy-Induced Gastrointestinal and Infectious Complications in Patients with Acute Myeloid Leukemia: A Double-Blind Randomized Clinical Trial

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ARTICLEINFO

Poster

Key words:
Ardeh, Acute myeloid leukemia, Chemotherapy, Honey.

ABSTRACT

Introduction:
We aimed to investigate the effects of dietary combination of honey and Ardeh on chemotherapy-induced complications in patients with acute myeloid leukemia (AML).

Materials and Methods:
A total of 107 AML patients who underwent chemotherapy for at least 30 consecutive dayswere recruited to this double blind randomized placebo-controlled clinical-trial which was conducted in the Imam Reza and Ghaem teaching hospitals (Mashhad, Iran). They weredivided into two age and sex-matched groups: 58 treated and 49 untreated patients. A combination of 50 grams of honey and 150 grams of Ardehwas added to the treated group's diet for 30 consecutive days, three times each day; while the untreated group received their regular diet.Both groups received their standard medication for AML as well. After one month, they were all examined and lab tests were done on them by an internist and laboratory technicians who were blinded to the subject allocations.

Resuls:
Duration of fever and admission in the hospital due to fever were both significantly lower in the treated group (P=0.014, P=0.032 respectively). Total gastrointestinal complications were significantly less in the treated group one month after therapy with the special honey and Ardeh compound.

Conclusion:
Useful effects in reducing fever and neutropenia in AML patients have been shown.

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Effects of Shallomin and Podophyllin Solution 25% for Genital HPV Warts in Women: A Randomized Controlled Trial

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ARTICLEINFO

Poster

Key words:
Genital wart, Human papillomavirus, Podophyllin.

ABSTRACT

Introduction:
To compare the effect of shallomin (pure fraction of Allium hirtifolium) with podophyllin 25% solution on external genital human papillomavirus warts in women.

Materials and Methods:
This study was a randomized controlled trial which was performed on two groups of 25 Iranian women with external genital warts at Imam Khomeini Hospital in Ahvaz, Iran. In the first group, shallomin was used once a day for six weeks at home. In the second group, 25% podophyllin solution, was applied on the lesion once weekly for six weeks.

Results:
Shallomin and podophyllin resulted in wart clearance in 13/23 (56.5%), and 12/24(50%) of patients, respectively. The clearance rate for shallomin was not significantly different from that of podophyllin (P=0.082). Six weeks after the treatment, the sizes of the lesions in the shallomin group and the podophyllin group decreased by (1.43±0.53) mm and (1.64±0.70) mm, respectively.

Conclusion:
Shallomin is an effective treatment for genital warts, with similar efficacy to that of podophyllin.

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Enhanced Bactericidal Effect of Ceftriaxone Drug Encapsulated in Nanostructured Lipid Carrier Against Escherichia Coli : Drug Formulation, Optimization, and Cell Culture Study

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ARTICLEINFO

Poster

Key words:
Antimicrobial drug resistance, Ceftriaxone, Drug delivery systems, Side effects.

ABSTRACT

Introduction:
In this study, a nanostructured lipid carrier (NLC) containing hydrophilic ceftriaxone sodium drug is developed, and its effect on eliminating gram-negative bacteria; Escherichia coli death is investigated.

Materials and Methods:
Double emulsion solvent evaporation method is applied to prepare NLC. Mathematical modeling based on the solubility study is performed to select the best materials for NLC preparation. Drug release from optimized NLC is examined under in vitro environment. Then, the efficacy of the optimized sample on eliminating *Escherichia coli* is investigated.

Results:
The optimal sample has a mean particle size of 86 nm and drug entrapment efficiency of 83%. Also, a controlled drug release in prepared nanostructures over time is observed under in-vitro media. The results regarding the effectiveness of optimized NLC in killing *Escherichia coli* suggests that by cutting drug dosage of the nanostructured form in half, an effect comparable to that of free drug can be observed at longer times.

Conclusion:
Results confirm that NLC structure is an appropriate alternative for the delivery of ceftriaxone drug with a controlled release behavior.

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Henoch Schonlein Purpura and COVID-19: A Case Series

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ARTICLEINFO

Poster

Key words:
COVID-19, Henoch schonlein purpura, SARS-CoV2.

ABSTRACT

Introduction:
COVID-19 is a major concern to rheumatologists as rheumatologic patients may potentially be at an increased risk of infection and death due to the underlying immune dysfunction and treatment with immunosuppressive agents. Few reports have described adults and children presenting with maculopapular, purpuric and acro-ischemic skin lesions who were subsequently diagnosed with COVID-19. Here, we report three cases of first presentations of henoch schonlein purpura (HSP) associated with COVID19 infection. Our cases had 2.5, 3 and 10 years of age and in all of them reactant factors were in normal range or low.

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Hematological Presentation of Brucellosis: A Case Series

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ARTICLEINFO

Poster

Key words:
Brucellosis, Hematologic presentation Thrombocytopenia.

ABSTRACT

Introduction:
Brucellosis is still endemic and a significant public health problem in many Mediterranean countries, including Iran. It is a multi-systemic disease with a wide range of clinical presentations including hematological disorders, such as anemia, pancytopenia, leucopenia, and thrombocytopenia. Thrombocytopenia is usually moderate and attributed to bone marrow suppression or hyper-splenism. Rarely, autoimmune stimulation can cause severe thrombocytopenia with clinically significant hemorrhagic manifestations. Here, we present three cases with 5, 9 and 15 years old with thrombocytopenic purpura as one of the presenting symptoms of Brucella infection. Treatment were performed and all cases were discharged by appropriate antimicrobial agents which was lead to promptly resolution of the thrombocyte count. The possibility of brucellosis should be considered as a differential diagnosis of thrombocytopenia or other hematologic disorders, especially those living in the endemic areas.

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Prevalence of Nosocomial Infections (Hospital-acquired infection) in Shahid Beheshti Hospital of Yasuj City

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ARTICLEINFO

Poster

Key words:
Nosocomial infection, Prevalence, Yasuj

ABSTRACT

Introduction:
Identifying and controlling of these infections provides a positive approach to health promotion Nosocomial infections are recognized worldwide as a major public health and he. Nosocomial infection is an infection that occurs 48 hours after the patient's admission to the hospital or within a specified period of 10 to 30 days after discharge for the patient with non-implant surgery or up to one year later for the patient with the implant. The patient was not infected at the time of admission or during the latency period.

Materials and Methods:
In this descriptive cross-sectional study, 13966 patients with nosocomial infection were studied in Yasuj Shahid Beheshti Hospital . The information was collected using a questionnaire designed by the National Hospital Infection Monitoring System. Descriptive statistics were used for data analysis with SPSS 20.

Results:
The overall prevalence of nosocomial infection was 5.5% in this study. The highest prevalence according to the number of patients in each ward was 4.18% for general surgery intensive care units, 2.89% for neurosurgical care and 1.31% for nephrology. The highest infection was in 24 cases of SSI and the lowest in 3 cases.

Conclusion:
The results of this study be used for continuous planning to control and prevent nosocomial infections.

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Prevalence Study of Multi-Drug Resistant Klebsiella Pneumonia in Akbar Pediatric Hospital, Mashhad

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ARTICLEINFO

Poster

Key words:
ESBL, Multidrug resistant, Klebsiella pneumonia.

ABSTRACT

Introduction:
The increased use of antibiotics and persistent exposure of *K. pneumonia* to a number of antimicrobial agents, facilitating the emergence of multidrug-resistant strains, which has further intensified the infection control strategies in many health care settings. The present study was conducted with an objective to examine the incidence of MDR strains of *K. pneumonia* recovered from Akbar Hospital, Mashhad.

Materials and Methods:
K. pneumonia isolates were collected from various ward of Akbar Hospital and then were approved based on morphological characteristics and biochemical tests. Antimicrobial resistance test was conduct by disc diffusion method according to CLSI guideline recommendations.

Results:
K. pneumonia accounted for 8.4% of the hospital isolates (131/1552) during the study period. Most of the isolates were multi drug resistant with highest resistance of over 50% to Penicillins, Cephalosporin and Sulphonamides. Quinolone resistance was also high at 41.5%. The lowest resistance rates were documented for aminoglycosides (30%). For specific antibiotics, there was high resistance to commonly used antibiotics (over 70% for Ampicillin, Cefazolin, Sulfamethoxazole and Cefoxitin).

Conclusion:
There was a high prevalence of multidrug resistant K. pneumoniae isolates in the hospital. These results have some important epidemiological implications. This study indicates that the practice of infection control unit of the hospital was efficient.

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Distribution and Antibiogram Pattern of Acinetobacter Infections in Akbar Hospital, Mashhad

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ARTICLEINFO

Poster

Key words:
Acinetobacter baumannii, Antibiotic resistance, Mashhad.

ABSTRACT

Introduction:
Acinetobacter baumannii has been designated as a "red alert" human pathogen, generating alarm among the medical fraternity, arising largely from its extensive antibiotic resistance spectrum. The goals of this study were to determine frequency and antimicrobial susceptibility pattern of *Acinetobacter* species in Akbar Pediatric Hospital in Mashhad.

Materials and Methods:
From September 2019 to September 2020, a total of 45 positive cultures were obtained from various clinical specimens of hospitalized patients. Antimicrobial resistance was measured by Kirby Bauer's disc diffusion method on all isolated bacteria. Interpretation was based on Clinical Laboratory Standard Institute (CLSI, 2019) criteria.

Results:
Total of 45 positive cultures were obtained from various clinical specimens of hospitalized patients. Suspicious isolates of Acinetobacter were identified by routine microbiological methods. Antimicrobial resistance was measured by Kirby Bauer's disc diffusion method on all isolated bacteria. Also, the minimum inhibitory concentration (MIC) was determined for Colistin by MIC test strips. Microbiological data of patients was analyzed by SPSS 16 software.

Conclusion:
A. baumannii is resistant to commonly administered antibiotics. There is need for continuous antimicrobial resistance surveillance especially in health care facilities and strengthening of antibiotic stewardship programs which will contribute to enhancement of infection control policies.

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Antimicrobial Resistance Pattern of Pseudomonas Aeruginosa in clinical isolates of Akbar Pediatric Hospital in Mashhad, the Northeast of Iran

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ARTICLEINFO

Poster

Key words:
Antimicrobial resistance pattern, Mashhad, Pseudomonas aeruginosa.

ABSTRACT

Introduction:
Pseudomonas aeruginosa is a major agents of nosocomial and community acquired infections, widely distributed in the hospital environment where they are particularly difficult to eradicate. This study was conducted to detect Prevalence and Antibiotic Resistance pattern of clinical isolates of *P. aeruginosa*.

Materials and Methods:
This is a retrograde descriptive study conducted for a period of Twelve months which ended on September 2020 at Akbar Hospital in Mashhad. *P. aeruginosa* isolates were collected from various ward of the hospital and then were approved based on morphological characteristics and biochemical tests. Antimicrobial resistance testing was performed and analyzed by Kirby Bauer technique on Mueller-Hinton agar plates.

Results:
Among the 1552 total clinical isolate, 46 isolates of *P. aeruginosa* were isolated. Urine (57%) was the predominant sample, which was followed by trachea (13%), wound (11%) and blood (9%). The most resistant drugs included cefixime and nitrofurantoin (96.7%), ampicillin (92.3%) followed by clindamycin (75%), ceftriaxone (55.6%) and cefotaxime (50%)

Conclusion:
Restriction of "selected antibiotic usage" and/or infection control policies must be tailored for each institution, to combat the rapid emergence of MDR P. aeruginosa in patients. The lack of newer antimicrobial agents with activities against *P. aeruginosa*, makes periodic studies on the antimicrobial resistance patterns very important.

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Evaluation of the Results of Diagnostic Tests of COVID-19 in the Medical Staff of Amir Al-Momenin Hospital in Bandar Genaveh in the First Six Months of 1999

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ARTICLEINFO

Poster

Key words:
COVID -19, Hospital, Iran, PCR test.

ABSTRACT

Introduction:
COVID-19is an acute respiratory syndrome whose most important diagnosis is PCR.

Materials and Methods:
This descriptive cross-sectional study was performed for all personnel suspected of COVID-19in Amir Al-Mo'menin Hospital in Bandar Genaveh in the first six months of 1399. Data were collected based on completed questionnaires and laboratory test results suspected of COVID- 19.

Results:
In the present study, out of 150 personnel with suspicious symptoms and performing PCR test, (64.6%) of the personnel had a positive test. At the same time, IgG and Igm tests were performed randomly from the medical staff. People with IgG positive, PCR test was negative. Studies have shown that most people with suspected respiratory symptoms, fever, and indigestion had a positive PCR and those with muscle pain had a negative PCR. Also, randomly IgG and IgM of individuals with positive PCR after checking recovery period and the results showed that in all patients with IgG, IgM did not increase.

Conclusion:
Analysis of the data suggests that the presence of muscle pain and a positive IgG test should not be considered as a diagnostic factor of COVID- 19.

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Molecular Detection of Dicrocoelium Dendriticum Isolated from Gastropod Snails in Southwestern Iran

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ARTICLEINFO

Poster

Key words:
Dicrocoelium dendriticum, Snail, Xiphidiocercariae.

ABSTRACT

Introduction:
In the last decades, conventional parasitology is used to detect the larval trematode in intermediate hosts and describe the natural history of D. dendriticum. Due to the underdevelopment and immaturity of internal organs of larvae and also, the structural similarity in different species at the genus or family level, the parasitic assessments are discussed. Therefore, using the use of molecular approaches can be an important point for accurate parasitic diagnosis in the larval stages of parasites and appear the intermediate hosts of parasitic life cycles.

Materials and Methods:
Some gastropod snails were collected from the northwest ponds of Khuzestan, southwest of Iran. After crushing the shells of snails and identification of cercariae, the genomic DNA of cercaria was extracted and the Internal transcribed spacer 2 region of the ribosomal gene amplified using PCR. Then the products were sequenced and analyzed.

Results:
Cercariae were identified as armatae xiphidiocercaria. PCR product with 374 bp of ITS-2 rRNA gene was sequenced and deposited in GenBank (MT459282.1). There was a close identity (up to 96%) with *Dicrocoelium dendriticum* obtained for comparison from GenBank.

Conclusion:
Identification of the main reservoir hosts of Dicrocoelium spp.play an important role in preventing Human dicrocoeliasis.

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A 9-Year Experience of Aspergillus Infections; A Report from Isfahan, Iran

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ARTICLEINFO

Poster

Key words:
Aspergillus, Causative agents, E-test, Itraconazole, amphotericin-B, Voriconazole

ABSTRACT

Introduction:
The genus of Aspergillus consist of various complexes, causing a wide spectrum of diseases from superficial infections in immunocompetent hosts to life-threatening disseminated infections among immunocompromised patients. This study aimed to identify Aspergillus species obtained from patients in Isfahan, and determine the antifungal susceptibility of 35 clinical isolates.

Materials and Methods:
A total of 2385 suspected cases were included in this retrospective study from January 2010 to December 2018. Direct microscopy and culture were applied to identify etiologic agents. Thirty-five isolates were identified by PCR-sequencing of ITS1-5.8SrDNA-ITS2 region, and their susceptibility to ITR, AMB, and VOR was determined using E-test.

Results:
132 out of 2385 suspected cases had Aspergillus infection (5.5%). Fifty-four patients were male, and 78 patients were female. Aspergillus flavus/oryzae (n=54), A. fumigatus (n=24), A. niger (n=15), and A. terreus (n=12) were the most prevalent Aspergillus species, respectively. The MIC ranges of AMB, ITR, and VOR for A. flavus/oryzae, A. niger, and A. terreus were (0.5–4 µg/mL; 0.5–16 µg/mL; 0.25–8 µg/mL), (1 µg/mL, 1 µg/mL, 1 µg/mL), and (4–4 µg/mL, 0.5–1 µg/mL, 0.5–1 µg/mL), respectively.

Conclusion:
Accurate identification at the species level is essential since the emergence of cryptic species is connected to different patterns of AFST that affect patient treatment outcomes.

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A Fatal Case of Bloodstream Infection by Fusarium Solani in a Patient with Adrenocortical Carcinoma

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ARTICLEINFO

Poster

Key words:
Adrenocortical carcinoma, Fusarium solani, Fungemia, ITS-sequensing, Isfahan.

ABSTRACT

Introduction:
Fusarium species are hyaline saprophytic fungi that are frequently found in the soil, air, and water. They can cause severe systemic infections in immunocompromised patients. Disseminated fusariosis often occurs in patients with hematological disorders, patients with cancer, and solid organ transplant recipients. Herein we report a case of *Fusarium* fungemia in a patient with adrenocortical carcinoma from Isfahan, Iran.

Materials and Methods:
The patient was a 41-year-old female with stage III adrenal cortical carcinoma. She admitted to the Department of Oncology due to febrile neutropenia, malaise, and weight loss. Gentamicin and vancomycin were started for probable bacteremia and blood culture was requested for her. Culture became positive for *Fusarium spp*. after 5 days. Internal transcribed spacer region sequencing applied for species identification.

Results:
Fusarium solani was determined as the etiological agent of fungemia and its sequence deposited in the GenBank (accession number: MK880379). Despite antifungal therapy with liposomal amphotericin B, the patient passed away 6 days after admission.

Conclusion:
Since the ideal strategies against invasive fungal infections remain uncertain and the mortality rate is high, we recommend primary prophylaxis with a broad-spectrum antifungal agent for vulnerable patients particularly those admitted to high-risk units such as oncology, hematology, and transplant units.

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Searching Sporothrix Schenchii in the Soil Of Qazvin City

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ARTICLEINFO

Poster

Key words:
Dimorphic fungi , Qazvin, Soil, Sporothrix schenckii.

ABSTRACT

Introduction:
Sporothrix schenchii is widely found in nature. The soil is first habitat. This micro organism is cause dangerous diseases in human. The purpose of this paper was isolation of Sporothrix schenchii from soil in Qazvin.

Materials and Methods:
In this study 150 sample of soil for search of Sporothrix schenchii have been examined in the area of Qazvin . Samples were collected from the surface of soil. The soil suspensions were prepared by adding of normal saline of soil. The soil suspensions were prepared by adding of normal saline and then antibiotics of streptomycin and penicillin were added to suspension. After adding it was shaken and then supernatant was cultured on sabouraud dextrose agar contain chloramphenicol with and without cycloheximide, plates were being incubated for 14 days at 30ºc. Clinical morphology was examined to identify isolated microorganisms.

Results:
All of plates were tested to be positive for saprophytic fungi. In this study 1550 colonies were isolated from 13 different of fungi. Dominant fungi were Cladosporium spp(29.93%),Aspergillus spp(22.70%), Penicillium spp (20.06%), Rhizopus spp(8.45%), Alternaria spp(6.64%), Mucor spp(3.80%). Chrysosporium spp(2%). Acremonium spp(1.61%), Yeast (1.48), Fusarium spp(1.35%) , Ulocladium spp(0.83) , Drechselera spp(0.58%), Scopulariopsis spp(0.45%).

Conclusion:
We don't find out Sporothrix schenchii in soil of Qazvin .

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Relationship of Leishmania RNA Virus (LRV) and Treatment Failure in Clinical Isolates of Leishmania Major

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ARTICLEINFO

Poster

Key words:
Glucantime, Leishmania major, Leishmania RNA virus, Treatment failure.

ABSTRACT

Introduction:
Leishmaniasis is caused by different Leishmania spp. Treatment failure (TF) of cutaneous leishmaniasis (CL) is a serious issue that may be due to various reasons, previous studies suggested Leishmania RNA virus (LRV) as a potential cause of TF. Two variant groups of LRV1 and LRV2 are reported. In this study, the presence of LRV1/LRV2 was compared in TF with treatment response (TR) isolates of L. major.

Materials and Methods:
Clinical isolates of 15 TF and 15 TR were collected from CL patients referred to the Health Centers of Isfahan. Genomic DNA was extracted to identify Leishmania spp. using ITS1-PCR-RFLP. Identification of LRV1/LRV2 was performed using SYBR Green Real-Time PCR. The statistical analysis to test relationship between the treatment response with Glucantime and the presence of LRV were performed using SPSS 16.0 with Fisher's Exact test. P value of less than 0.05 was considered significant.

Results:
ITS1-PCR-RFLP results showed that every isolate was identified as L. major. The results showed no LRV1 in any of the samples but 7 TR isolates and 2 TF isolates showed positive for LRV2.

Conclusion:
Statistical analysis showed no significant difference between the presence of LRV2 and response to Glucantime (P= 0.1086). Therefore, other mechanisms might be responsible for TF.

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COVID-19 Related Kawasaki Syndrome: A Case Report

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ARTICLEINFO

Poster

Key words:
COVID19, Kawasaki, Multisystem inflammatory syndrome in children (MIS-C).

ABSTRACT

Introduction:
We describe here a child diagnosed and treated for classic Kawasaki disease in the setting of confirmed COVID-19 infection. The patient is an 8-year-old, previously healthy and fully immunized girl who initially presented to pediatric emergency department with 5 days of intermittent fever, followed by abdominal pain, nausea and vomiting. She was admitted by fever and abdominal pain in surgery service of Akbar hospital with impression of appendicitis.

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Tryparedoxin Peroxidases as A Drug Target Against Leishmania

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ARTICLEINFO

Poster

Key words:
Drug target, Tryparedoxin peroxidases, Leishmania, Oxidative stress.

ABSTRACT

Introduction:
Leishmaniasis is a tropical disease caused by the intracellular protozoan parasite of genus Leishmania. To establish a successful infection, pathogens require a robust defensive system to counteract host-generated oxidative stress and their products. The peroxiredoxin system is distinct from antioxidant defense systems and absence of the parasite components in the human host makes them potential drug targets. Tryparedoxin peroxidase as one of the cascade of that system is considered as the terminal enzyme to eliminate peroxides. Studies demonstrate different roles of tryparedoxin peroxidase in defending the parasites against oxidative stress during infection and drug treatment.

Materials and Methods:
In this study, the databases of Scopus, PubMed, and Google Scholar were searched from 2010 to 2020. The key words included in this study were "Leishmania" and "tryparedoxin peroxidases".

Results:
In this assay, we found four papers introducing three compounds for inhibition of the disease with the target of tryparedoxin peroxidases. These compounds are Taxifoli and 3-((((1-Benzyl-1H-tetrazol-5-yl) methyl) (1-adamantyl methyl) amino) methyl)-6,7-dimethoxyquinolin-2(1H)-one and Methotrexate that show inhibitory effects against Leishmania. The other study showed that compounds derived from N, N-disubstituted 3-aminomethyl quinolones have high inhibitory potency towards tryparedoxin peroxidases.

Conclusion:
Tryparedoxin peroxidases family is considered as one of the most important drug target against leishmaniasis.

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Detection OXA-types genes in Acinetobacter baumannii strains isolated from hospitalized patients in Motahari hospital in Tehran, Iran

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ARTICLEINFO

Poster

Key words:
Acinetobacter baumannii, BlaOXA, Carbapenemases, multi-drug resistance, Extensively drug resistance.

ABSTRACT

Introduction:
The emergence of multidrug resistance (MDR) and extensively drug resistance (XDR) in *Acinetobacter baumannii* has made an important challenge in the treatment of infections caused by this organism. The ability of carbapenemases production is one of the main mechanisms for the emergence of MDR and/or XDR in *A.baumannii*. The aims of this study were to determine the antimicrobial susceptibility pattern and blaOXA genes.

Materials and Methods:
In this study, 100 *A.baumannii* isolated from burn wound infections and their susceptibilities to different antibiotics were determined using disc agar diffusion testing. Then a run of Multiplex PCR was set for blaOXA genes.

Results:
The results showed that 99% of strains were MDR and 87% of them were XDR. In addition, all strains carried blaOXA-24 like and blaOXA-51 like. 82% and 4% of strains harbored blaOXA-24 like and blaOXA-58 like, respectively.

Conclusion:
The results of this study indicate that prevalence of blaOXA genes in *A.baumannii* causing resistance to carbapenems and lead to nosocomial infections in burn patients which can be important for hospital infection prevention systems in Iran

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Ecological Niche Modeling of Main Reservoir Hosts of Zoonotic Cutaneous Leishmaniasis in Iran

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ARTICLEINFO

Poster

Key words:
Animal reservoir host, Ecological Niche modeling, Iran, Zoonotic cutaneous leishmaniasis.

ABSTRACT

Introduction:
Zoonotic cutaneous leishmaniasis (ZCL), caused by Leishmania major, is a common zoonotic vector-borne disease in Iran. Four gerbil species (Rodentia: Gerbillidae) serve as the main reservoir hosts for ZCL in different endemic foci of Iran. The purpose of this study is to model the distribution of these reservoirs to identify the risk areas of ZCL.

Materials and Methods:
Maximum entropy model was used to find the most appropriate ecological niches for each species. The areas under curve obtained were 0.961, 0.927, 0.922, 0.997 and 0.899, instead of 1, fortraining test in R. opimus, M. libycus, T. indica, M. hurrianae and N. indica, respectively. The environmental variable with the highest gain when used in isolation was slope for R. opimus and N. indica, annualmean temperature for M. libycus, and seasonal precipitation for T. indica and M. hurrianae.

Results:
Summation of presence probabilities for three main species, i.e., R. opimus, M. libycus and T. indica revealed favorable ecological niches in wide areas of 16 provinces.

Conclusion:
Climatology and topography variables had high contributions toward the prediction of potential distribution of the main reservoir species; therefore, as climate changes, the models should be updated periodically with novel data, and the results should be used in disease-monitoring programs.

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The Study of Infection Control Standards During Corona Pandemic At the Intensive Care Units of Mazandaran Province in 2020

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ARTICLEINFO

Poster

Key words:
Infection control, Intensive care units, Standard.

ABSTRACT

Introduction:
Codification and applying the standards of infection control at ICU wards lead to more survival and money savings. The purpose of this study was to study of infection control standards during Corona Pandemic at ICU of Mazandaran province.

Materials and Methods:
The method of this study was descriptive and analytical, in 2020. The statistical population was the intensive care units of public, private and social insurance hospitals of Mazandaran province, Iran. Data collection tool was a researcher-made questionnaire consisted of 95 questions through 8 dimensions. The content validity of the questionnaire was confirmed by experts and the construct validity was confirmed by confirmatory factor analysis; the reliability was confirmed by Cronbach's alpha coefficient. Data analysis was done by ANOVA and Post Hoc Tukey test with SPSS 21.

Results:
The infection control's mean score at the ICUs was 3.82± 0.20, which has a significant difference. Also, the needle stick indicator (4.75± 0.68) had the highest score and the standard precautions (2.7± 0.63) had the lowest.

Conclusion:
Due to the severe life-threatening conditions at this ward, continuous evaluation of the infection control's dimensions is recommended to identify the strengths and weaknesses and consequently making appropriate decisions to provide better services in accordance with the principles.

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COVID-19; Infection Control Conflicts at Hospital

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ARTICLEINFO

Poster

Key words:
COVID-19, Hospital, Infection control.

ABSTRACT

Introduction:
According to the rapid incidence of COVID-19 and the lack of standard treatment and effective vaccines, the best remedy is the prevention of infection and its incidence. The aim of this study was the description of the hospitals' infection control conflicts during the pandemic.

Materials and Methods:
This study is a qualitative one. 22 infectious disease physicians and infection control nurses, with at least five years of experience, were participated. Data were collected through semi-structured interviews based on purpose and snowball sampling; they continued until data saturation. The interviews were conducted, semantic units were determined, coded, categorized based on similarity and analogy. The themes were identified, analyzed and interpreted by content analysis method.

Results:
Four main themes and 11 sub-themes were extracted in this study. Unsafe usage of personal protective tools, lack of adequate physical space, lack of an appropriate ventilation equipment and the lack of medical staff are the main conflicts of hospital infections control during the COVID-19 pandemic.

Conclusion:
The designation of infection prevention protocols and strategies is recommended, increase the number of clinical staff and conduct training courses to prevent COVID-19 infections.

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Evaluation of Antimicrobial Activity of Methanol and Aqueous Extracts of *Ganoderma Lucidum* Against Clinical Isolates of Escherichia Coli

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ARTICLEINFO

Poster

Key words:
Antibacterial activity, Escherichia coli, Ganoderma lucidum.

ABSTRACT

Introduction:
Ganoderma lucidum (reishi) is a traditional Chinese medicine product known to the layman as the "herb of immortality". The aim of this study was to evaluate the antimicrobial activity of methanol and aqueous extracts of *Ganoderma lucidum* against clinical isolates of E. coli.

Materials and Methods:
Clinical isolates of E. coli were identified by biochemical and molecular methods (polymerase chain reaction by 16Sr RNA primer). Antibacterial activity of aqueous and methanol extracts of Ganoderma was examined by disc diffusion and broth dilution method along with Chloramphenicol as positive control.

Results:
All isolates had DNA amplification bands similar to the standard strain by PCR. Of the 51 (100%) clinical isolates of *E. coli*, 47 (92.15%) were resistant to both extracts and 3 (5.88%) showed inhibitory zone. MICs were 3.33 mg/ml and 2.25 mg/ml for aqueous and methanol extract, respectively.

Conclusion:
The results showed that compared to other studies testing the antibacterial effect against the reference strains, a small percentage of clinical isolates *of E. coli* were sensitive to the total extract of *G. lucidum*.

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Gastrointestinal Myiasis Due To A Dipterous Fly: In An Immunocompromised Patient In Mashhad, Iran

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ARTICLEINFO

Poster

Key words:
Intestinal myiasis, Iran, Sarcophaga spp

ABSTRACT

Introduction:
The study describes the isolation Maggots' of dipterous fly isolated from the feces of an immunocompromised female patient with a history of double kidney transplantation. A 32-years-old woman from Golestan Province was referred in July 2018 to Ghaem Hospital in Mashhad.

Materials and Methods:
After a month of her hospitalization, she suddenly complained of fever, gastrointestinal pain, cramps, vomiting; and fatigue. In the microscopical examination of her stool, 15 whitish motile worms observed that firstly were misdiagnosed by Enterobius vermicularis worms by a lab technician, but later confirmed for maggots of a fly. Identification, classification, and terminology of the adult flies and larvae followed and described

Results:
Finally, the specimens were diagnosed as Sarcophaga (Liopygia) spp.

Conclusion:
Intestinal myiasis due to unplanned intake of dipterous larvae of the *Sarcophagidae* family could be a serious threat in immunocompromised patient due to the probability of systemic dissemination of migrant maggots.Aside from the public health aspects importence it could be attracted for health professionals to aware that this infestation may happen regardless of the socioeconomic conditions. Hospitals also should elevate their standards for isolation of such pateints.

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Neonatal Prevention of COVID-19 Infection and Breastfeeding

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ARTICLEINFO

Poster

Key words:
Breastfeeding, Coronavirus, Newborns, Prevention, Hand washing, mask

ABSTRACT

Introduction:
BMF is the healthiest food for the baby, even in infections, and it has proven numerous benefits in increasing the baby's health.
Materials and Methods:
In addition to the known benefits of BMF, mother's milk may provide protective factors to the infant after maternal COVID-19 infection. No study to date has demonstrated the presence of SARS-CoV-2 in breast milk. WHO recommends that mothers with suspected or confirmed COVID-19 should be encouraged to initiate or continue to breastfeed.
Results:
Early skin to skin contact, breastfeeding in the first hour and rooming in of mother and infant are recommended. Before breastfeeding hand washing with soap and water, and if are not available, hand sanitizer should be done with a solution containing at least 60% alcohol and a mask with mouth and nose cover are recommended.
Conclusion:
If mothers are too ill to breastfeed, they should still be supported to express their milk, and the infant should be fed by a healthy individual. Before starting the milking process, wash her hands thoroughly with soap, water or a suitable detergent according to the instructions. Frequent hand expression or pumping, ideally with a hospital-grade pump, will help her establish and build milk supply if mother are separated from her newborn.

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Perinatal-Neonatal Prevention of COVID-19 Infection

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ARTICLEINFO

Poster

Key words:
COVID-19, Coronavirus disease 2019, Hand washing, mask, Newborns, Prevention

ABSTRACT

Introduction:
Infections causing COVID-19 in newborns born to mothers with COVID-19 are uncommon. In the hospital after delivery, clinicians have refined practices in order to prevent secondary infection.

***Materials and Methods*:**
It is recommended to resuscitate these infants using protective equipment for hats, goggles or face shields, N95 mask, liquid permeable gun, latex gloves and shoe cover.

Results:
Delay cord clamping, early skin to skin contact, breastfeeding in the first hour, early bathing and rooming in of mother and infant are recommended. COVID-19virus Infection of the newborn is mainly through respiratory particles in the postpartum period from infected people or carriers. Mask and hand washing before contact with the baby is the most important way to prevent the baby from getting COVID- 19.

Conclusion:
It does not seem that vertical transmission, type of delivery, feeding methods, contact with mother are effective in the spread of neonatal infection. Separating the baby from the mother is recommended in cases where the mother's general condition is bad or the baby has a serious underlying disease.

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The Coronavirus (COVID-19) in Pregnant Mothers and Their Newborn

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ARTICLEINFO

Poster

Key words:
COVID-19, Neonate, Pregnant mother

ABSTRACT

Introduction:
COVID-19, which has been an epidemic and pandemic in the world since late 2019, also occurs in pregnant mothers and it is possible to transmit to fetus and baby after birth. The aim of the study is to evaluate COVID-19 in pregnant mothers and their infants.

Materials and Methods:
All mothers and their newborns who delivered in two maternity centers and had symptoms of respiratory infections were tested for coronavirus.

Results:
Out of 31 pregnant mother fifteen mothers had prenatal and 16 postpartum symptoms suspected of having a coronavirus infection. Most infants had respiratory symptoms(18) and even suspicious radiographs showed only 5 had positive coronavirus test . Most mothers had cesarean section for various reasons and 8 mothers had a normal delivery. In most infants, there was less than 90% positive pulse oximetry, Positive. Coronavirus testing was performed using R.T PCR on nasopharyngeal samples, which was reported in only 6 positive infants.

Conclusion:
COVID-19 disease in pregnant mother and neonate is an obvious fact and should be considered. Of course, there is little information about placental transmission to the fetus

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Evaluation of Antibacterial activity of Cs-Se NPs

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ARTICLEINFO

Poster

Key words:
Antibacterial, Chitosan, Disinfection, Selenium.

ABSTRACT

Introduction:
In this in vitro study the antibacterial activity of the chitosan-Selenium nanoparticles (Cs-Se NPs) solution against gram-positive and gram-negative bacteria was evaluated.

Materials and Methods:
Cs-Se NPs solution was synthesized and characterized. The minimum inhibitory concentration (MIC) and minimum bactericidal concentration (MBC) of the Cs-Se NPs solution against gram-negative (*Pseudomonas aeruginosa*, *Salmonella typhimurium*, *E.coli*) and gram-positive (*Streptococcus sanguinis*, *Staphylococcus aureus* and *Enterococcus faecalis*) was determined by broth microdilution method.

Results:
S. sanguinis, *S. aureus*, and *E. faecalis* showed MIC values of 0.068, 0.137, and 0.274 mg/mL, respectively. Moreover, the results revealed that the concentration of 0.274 mg/mL had a higher bactericidal effect than the other concentrations. As the concentration of Cts-Se-NPs increased to 0.274 mg/mL, *S. sanguinis*, *S. aureus*, and *E. faecalis* were completely killed after 1, 2, and 6 h, respectively. Further, *S. aureus* and *S. sanguinis* were totally killed after 24 and 6 h, respectively, at the concentration of 0.137 mg/mL. The Cts-Se-NPs solution did not elicit any significant antibacterial effect against *P. aeruginosa*, *S. typhimurium*, and *E. coli*.

Conclusion:
In conclusion, Cs-Se NPs solution can be investigated further for various antibacterial applications in medicine fields such as disinfection and sterilization of medical devices.

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Brucellosis in Children, the Disease of Rural Families

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ARTICLEINFO

Poster

Key words:
Brucellosis, Children, Risk factor

ABSTRACT

Introduction:
Brucellosis is a common disease in our country especially in rural regions. Children became infected and presented with various presentations.
Materials and Methods:
During 1 year all children with diagnosis of brucellosis referred to our private clinic were included in our study. Demographic and risk factors of the diseases were analyzed using software SPSS version 2016.
Results:
Twenty-seven children aged 2-15 years with serological diagnosis of brucellosis entered in our study. History of contact with sheep and cattle was positive in 15(55.6%). Hx of ingestion of local dairy products was in 25(92.6%) of cases. Fifteen children (55.6%) had at least one family member with brucellosis.
Conclusion:
Brucellosis is common in children and vaccination in sheep and cattle should be emphasized.

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The Association of ABO and RhD Blood Group with Disease Severity in COVID-19

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ARTICLEINFO

Poster

Key words:
ABO and RhD blood group, COVID-19, Disease severity, SARS-CoV-2.

ABSTRACT

Introduction:
Introduction: The rapid global spread of the Coronavirus disease 2019 (COVID-19) caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) has strained healthcare resources. Recent evidence suggests ABO and RhD blood group may affect risk of severe COVID-19.

Materials and Methods:
Methods: The research was conducted on 253 COVID-19 patients that was tested by SARS-CoV-2- real-time- polymerase chain reaction assay (SARS-CoV-2- RT-PCR) between 3 May 2020 and 29 September 2020, with a known ABO and RhD blood group, to determine the influence of common blood groups on Disease Severity in Tehran.

Results:
Significant statistical relationship was observed between ABO and RhD blood group and Disease Severity ($P < 0.05$). The results showed that COVID-19 patients with blood types A and AB were more prone to dysfunction or organ failure than those with blood groups O and B (especially Rh negative). In addition, people with blood types A and AB experienced more severe symptoms of COVID-19 than others. As a result, they were hospitalized longer in the intensive care unit.

Conclusion:
We found that ABO and RhD blood group may play a role in Disease Severity in COVID-19. However, additional research is needed to better understand why and what it means for patients.

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Human Papillomavirus and Helicobacter Pylori in Head and Neck Squamous Cell Carcinoma

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ARTICLEINFO

Poster

Key words:
Human Papillomavirus, Head and neck squamous cell carcinoma, Helicobacter pylori, Proto-oncogene genes.

ABSTRACT

Introduction:
The change of proto-oncogenes to active oncogenes can be done by inherited changes or environmental factors (such as viruses, rays and carcinogens). Helicobacter pylori (H.pylori), spiral gram-negative bacteria, is a gastrointestinal tract, stomach and oral cavity pathogen and considered one of the common infections in the world. However, its presence does not involve in the biofilm creation in oral cavity. On the other hand, recently the incidence of Human Papillomavirus (HPV) which is associated to oropharynx cancer has been increased. Understanding the impact of H.pylori and HPV on the clinopathological outcome of HNSCC is critical for treatment approaches for H.pylori and HPV positive cases among HNSCC patients.

Materials and Methods:
The roles of bacterium infection might be into onset of cancer growth and maintenance of cancers.Previous studies showed there was association between infection to H.pylori and the possibility of esophageal squamous cell carcinoma (ESCC) among East Asian populations.

Results:
The roles of bacterium infection might be into onset of cancer growth and maintenance of cancers. Previous studies showed there was association between infection to *H.pylori* and the possibility of esophageal squamous cell carcinoma.

Conclusion:
between 0% to 100% according to PCR method. However, different studies have shown the results were between these two these values.

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Possible Future Therapeutic Approaches of SARS-Cov-2 Infection

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ARTICLEINFO

Poster

Key words:
ARDS, Coronavirus, COVID-19, SARS-CoV-2

ABSTRACT

Introduction:
Coronavirus disease 2019 (COVID-19) is caused by Severe acute respiratory syndrome coronavirus SARS-CoV-2, a novel coronavirus from the Coronaviridae subfamily. It has been pandemic wide spread and manifest flu-like symptoms. It can become serious because of inflammation following viral lung cell attachment and acute respiratory distress syndrome (ARDS) that result in death. There are no proven antiviral drugs for the treatment or any vaccines to prevent from SARS-CoV-2 infection. Current evidences suggest that main therapies being used to treat the COVID-19 are antiviral drugs, chloroquine/ hydroxychloroquine and respiratory therapy.

Materials and Methods:
The structural proteins of virus interact with human cells are one of the candidate for vaccine development, special ACE-2 receptors in lung. Some anti-inflammatory factors decrease inflammation and stimulate regeneration of tissues following ARDS like anti IL-6R, IL-17, interferon and mesenchymal stromal cells.Tlymphocytes are another option.

Results:
Studies based on protein interaction identified the human proteins that physically associated with each of the SARS-CoV-2 proteins using affinity-purification mass spectrometry. The map network of proteins that involve in viral infection process can be useful to detect target protein that inhibit or reduce SARS-CoV-2 replication, transcription or propagation.

Conclusion:
Randomized clinical trials and more investigation are needed to determine the most appropriate evidence-based treatment modality.

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The Challenges and Benefits of Antiviral Therapeutic Approaches in HIV Infected Patients

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ARTICLEINFO

Poster

Key words:
Antiretroviral, AIDS, HIV,Therapeutic approach.

ABSTRACT

Introduction:
Thirty- five million people all around the world affected by human immunodeficiency virus (HIV) and 10 million of them receive antiretroviral therapy (ART). The combination ART decrease viral replication, transmission and sparing the massive depletion of the immune system that has been related to acquired immunodeficiency syndrome (AIDS), opportunistic infections, and death. Moreover, cART has provided significantly longer life expectancy than before. Antiretroviral strategies are evolving towards a decrease in drug burden, and some two-drug combinations have been the standard treatment for maintenance therapy. Investigational immune checkpoint inhibitors and neutralizing antibodies with effector functions have improved HIV effective cure development. Although ART provide anti-inflammatory therapy, but short term tolerability and potential long term toxicity present following utility of the property drugs.

Materials and Methods:
Newest dual regimens are most attractive as induction-maintenance strategy, ensuring that plasma viral load last undetectable whereas a cheaper, safer, and convenient treatment is given.

Results:
Understanding of exact molecular pathogenesis of HIV infection in cellular body and with our genome help us to reduce current and future medical side effects. By 2030 the CDC programed to apply a 90-90-90 plan (90% HIV diagnosed, 90% on therapy, and 90% suppressed).

Conclusion:
In this review, we valuated challenges and advantages of ART therapeutic approach in HIV infection.

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Brucellosis in Children, Clinical Findings

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ARTICLEINFO

Poster

Key words:
Brucellosis, Clinical manifestation, Children.

ABSTRACT

Introduction:
Brucellosis has different clinical pictures in children.
Materials and Methods
During 1 year all children with diagnosis of brucellosis referred to our private clinic were included in our study. Demographic, clinical findings and important laboratory tests were analyzed using software SPSS version 2016.
Results:
Twenty-seven children aged 2-15 years with serological diagnosis of brucellosis enrolled in our study. Boys are involved twice as girls. Fever in 19(70.4%), limping 10(37%), anorexia 10(37%), hepatomegaly or splenomegaly 9(33.3%), hip arthritis 7(25.9%) and headache in 7(25.9%) were the most common clinical findings. Two patients had oral ulcers improved after treatment of brucellosis. Leucopenia was present in 6(22.2%).Six (22.2%) of children developed relapse or had history of relapse after conventional medical treatment.
Conclusion:
Brucellosis in children should be considered in all children with fever and limping in our country.

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Antibacterial Activity of Salvia Hydrangea Extract Against Streptococcus Mutans Isolated From Mouth and Comparison with Vancomycin Antibiotic in Vitro

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ARTICLEINFO

Poster

Key words:
Antibacterial activity, Streptococcus mutans, Ssalvia hydrangea, Vancomycin.

ABSTRACT

Introduction:
The aims of this study was to determine the antibacterial activity of hydro and methanol extract from flowers of Salvia hydrangea against *Streptococcus mutans* isolated from mouth and their comparison with vancomycin antibiotic in vitro.

Materials and Methods:
First, two sample of hydro and methanol extract of the plant flowers was prepared by maceration method and then its antibacterial activity against *Streptococcus mutans* isolated from 70 samples of mouth was evaluated by well diffusion and agar dilution methods for determining of MIC. Also, we studied the activity of vancomycin antibiotic on them by disk diffusion method.

Results:
Statistical methods were using to analyze the data. The results demonstrated that the Salvia hydrangea hydro and methanol extract had not been effective against 70 *Streptococcus mutans* (up 100mg/ml). *Streptococcus mutans* isolated were sensitive to Vancomycin (100%).

Conclusion:
This study demonstrates that a hydro and methanol extract of Salvia hydrangea have not anti bacterial activity against *Streptococcus mutans* isolated from mouth and vancomycin is better than hydro and methanol extract of Salvia hydrangea. Further investigations will be necessary.

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Epidemiologic Survey of Brucellosis for Twenty-one years from 1999 to 2019 in Khorasan Province

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ARTICLEINFO

Poster

Key words:
Brucellosis, Human, Iran.

ABSTRACT

Introduction:
Brucellosis is an infectious disease that can be transmitted from animals to humans, which is determined by abortion, placental abruption, orchitis, epididymitis, and fertility disorders in primary hosts (animals) and fever, chills, sweating, weakness, joint pain, headache, and general pain determine in humans. Except for a small number of countries in the world that are free of infection or have been eliminated, most states have been infected; brucellosis is a global issue.

Materials and Methods:
In this study all cases with diagnosis of brucellosis from 999 to 2019 entered. Statistical analysis was done using SPSS version 2016.

Results:
In study period 33300 case of brucellosis recorded in our registry. Most were from rural population (86.6%), 26.6 in 10-19 year's old group, male (56.9%), housewives (29.3%), history of contact with livestock (29.3% were other important points.
Most brucellosis cases had a history of consumption of unpasteurized dairy products (88.7%)

Conclusion:
Planning and compiling the action plan for brucellosis should be done based on the results obtained from data analysis to control and reduce the causes of diseases transmitted between humans and animals. Vaccination of sheep and cattle against brucellosis should be more emphasized. Strengthening of care system, giving and receiving reports and educational planning should be done.

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Hand Rub Poisoning in Children

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ARTICLEINFO

Poster

Key words:
Children, Hand sanitizer, Poisoning.

ABSTRACT

Introduction:
Today, children are exposed to different types of chemicals. Due to epidemiological problems such as the Covid-19 epidemic and the need to use disinfectants at home, children are exposed to poisoning. Awareness of symptoms and management of poisoning with these solutions, It is very important for health care providers because it can cause dangerous disorders

Materials and Methods:
During the first 6 months of 2020, 20 children referred to Akbar Hospital in Mashhad, Iran (Children's Poison Control Center) who ingested hand sanitizer. Their clinical and para clinical parameters were evaluated.

Results:
Medical information and laboratory parameters were recorded. The total number of patients was 20. 80% were male. Age range, between 2and 15years. The average hospital stay was 12 hours. All clinical and laboratory parameters were normal.

Conclusion:
Formulation of hand sanitizers in this area is in doubt.
Although the clinical and Para clinical parameters were almost normal in children treated with the disinfectant solution during this study, further investigation is needed to confirm this conclusion.

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Evaluation of Antimicrobial Activity of Methanol and Aqueous Extracts of *Ganoderma Lucidum* Against Clinical Isolates of Escherichia Coli

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ARTICLEINFO

Poster

Key words:
Antibacterial activity, Escherichia coli, Ganoderma lucidum.

ABSTRACT

Introduction:
Ganoderma lucidum (reishi) is a traditional Chinese medicine product known to the layman as the "herb of immortality". The aim of this study was to evaluate the antimicrobial activity of methanol and aqueous extracts of *Ganoderma lucidum* against clinical isolates of E. coli.

Materials and Methods:
Clinical isolates of E. coli were identified by biochemical and molecular methods (polymerase chain reaction by 16Sr RNA primer). Antibacterial activity of aqueous and methanol extracts of Ganoderma was examined by disc diffusion and broth dilution method along with Chloramphenicol as positive control.

Results:
All isolates had DNA amplification bands similar to the standard strain by PCR. Of the 51 (100%) clinical isolates of *E. coli*, 47 (92.15%) were resistant to both extracts and 3 (5.88%) showed inhibitory zone. MICs were 3.33 mg/ml and 2.25 mg/ml for aqueous and methanol extract, respectively.

Conclusion:
The results showed that compared to other studies testing the antibacterial effect against the reference strains, a small percentage of clinical isolates *of E. coli* were sensitive to the total extract of *G. lucidum*.

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Evaluation of PVL and PSM Genes in Methicillin-Resistant *Staphylococci* Isolated from Patients Admitted to Taleghani Hospital in Tehran

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ARTICLEINFO

Poster

Key words:
Antibiotic resistance, Disk diffusion, PVL, PSM, Staphylococcus aureus.

ABSTRACT

Introduction:
Methicillin-resistant *Staphylococcus aureus* (MRSA)infections are studied in two groups: community-associated MRSA (CA-MRSA) and healthcare-associated MRSA (HA-MRSA). Numerous CA-MRSA virulence factors have been identified. Panton—Valentine leukocidin (PVL) and secreted peptides called phenol-soluble modulins (PSMs) have been identified as key virulence factors that are also strongly expressed in staphylococci and CA-MRSA.

Materials and Methods:
545 clinical samples were isolated in different wards of Taleghani hospital in Tehran. 68 strains were identified as *S. aureus* and they were tested by Kirby Bauer disk diffusion method. Interpretation of the results was based on guidelines provided by the Clinical Laboratory Standards Institute (CLSI). Also strains were scrutinized for the presence of PVL and PSM genes by Multi-Plex PCR method.

Results:
The results showed the isolated bacteria had a very high resistance to antibiotics. Also the molecular tests revealed that the number of strains contained PVL and PSM genes were 3 and 66, respectively.

Conclusion:
The differences in the frequency and prevalence of psm, pvl and antibiotic resistance genes between various countries, different hospitals, wards and even between individuals in a community can be related to the amount of antibiotic use, the emergence of different mechanisms of resistance, selection and release of resistant colonies under the pressure of antibiotic use.

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Assessment of Bacterial Contamination of the Hands and Coat and Its Relationship with Hand Hygiene in the Health Care Workers in Gonabadi Allameh Bohlol Hospital in 2018

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ARTICLEINFO

Poster

Key words:
Dress, Hand hygiene, Health care workers, Microbial contamination.

ABSTRACT

Introduction:
Nosocomial infections are one of the major challenges of the health care system and today are a global problem and one of the risk factors in hospitalized patients. The purpose of this study was to determine the bacterial contamination of the hands and coat and its relationship with hand hygiene in the health care workers in Gonabadi Allameh Bohlol hospital in 2018.

Materials and Methods:
The study is a descriptive-analytical study that was performed on 360 samples from 120 medical personnel working in different parts of the hospital. The standard checklist for hand hygiene assessment was completed. Sampling was done and after microbial culture of the samples, colonies were counted and bacteria were identified. Data were analyzed using SPSS software version 21.

Results:
There was a significant relationship between hand hygiene and gender, age, education and work experience, while there was no significant relationship between hand hygiene and occupation. In this study, all people in different parts of the hospital had microbial contamination and the infection rate was low.

Conclusion:
The results of this study showed that all the health care workers had microbial contamination in their hands, pockets and sleeves and the most bacteria isolated from these three parts were *Staphylococcus epidermidis*.

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Prevalence of an Important ESBL Encoding Gene in *Acinetobacter Baumannii* Strains Isolated from Patients of Intensive Care Units (ICU)

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ARTICLEINFO

Poster

Key words:
Acinetobacter baumannii, BlaTEM, Extended spectrum beta-lactamase.

ABSTRACT

Introduction:
Acinetobacter baumannii is a gram-negative coccobacilli and has a grate important role in health care associated infections. Extended-spectrum ß-lactamases (ESBLs) encoding genes such as blaTEM causes resistance to penicillins and 3rd generation cephalosporins. blaTEM is one of the most significant members of β-lactamases.The aim of this study was to investigate the prevalence of ESBLs encoding genes, including blaTEM in resistant *A. baumannii* species.

Materials and Methods:
In this study 103 clinical isolates of *A. baumannii* were collected from patients of intensive care units (ICU) in Imam-Reza Hospital in Mashhad. All isolates were tested for their antimicrobial susceptibility patterns, using the standard guidelines issued by the clinical and laboratory standards institute (CLSI). Gene encoding the blaTEM was investigated by PCR using specific primers.

Results:
Most of isolated species were resistant to imipenem, meropenem, ceftazidime and cefotaxime. As expected, blaTEM gene has been expressed in many of isolates which were ESBL positive by phenotypic detection. Our results show that blaTEM gene was found in 78.64% (n=81) of *A. baumannii* isolates.

Conclusion:
Selection of the most effective antibiotic is a decision best made by each clinical microbiology laboratory in consultation with the infectious diseases practitioners and pharmacologists, as well as therapeutic and hospital infection control committees.

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Impact Of COVID19 on Hand Hygiene Performance in Healthcare Worker in Akbar Pediatric Hospital, Mashhad

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ARTICLEINFO

Poster

Key words:
COVID19, Hand hygiene, Handwashing, Healthcare worker.

ABSTRACT

Introduction:
Hand-rubbing is an important, simple and cost-effective method for reducing the transmission of COVID19, especially in healthcare workers (HCWs). HCWs should obey the principle of 5-moments hand hygiene of WHO. In this study, we assessed the effect of covid19 pandemic on hand-hygiene in HCWs in Akbar pediatric hospital, Mashhad.

Materials and Methods:
This was a cross-sectional investigation in which we evaluated the HCWs' data from infection control unit. These data were collected during the December to July 2020 (from beginning COVID19 pandemic in Iran) monthly by a checklist according WHO's principle"My 5 Moments for Hand Hygiene".

Results:
During the study period we evaluated 978 HCWs in different wards. The mean of missing hand hygiene before contact, before aseptic procedures, after contact, after touching surrounding and after touching discharges were respectively: 1.34±1.87, 0.9±1.52, 0.61±1.12, 1.48±2.24 and 0. 33±0.82 times. Our results showed that nearly in all items of hand-hygiene, missing each of five apportunities were significantly decreased after two-months of starting COVID19 pandemic and then dropped again after new wave start of disease.

Conclusion:
Possible cause of increasing rate in hand hygiene performance and then decreasing it, can be possibly related to increased emphasis on the importance of hand hygiene in first surge of disease. washing may lead to decrease the rate.

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Risk Factors of COVID19 in Frontline Healthcare Workers: A Cross Sectional Study

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ARTICLEINFO

Poster

Key words:
COVID19, Healthcare workers, Personal protective equipment.

ABSTRACT

Introduction:
According to continuing the pandemic and the transmission of disease by asymptomatic persons, its load is growing up daily. So, the exposure of front-line healthcare workers (HCW) will be increased. In this study, we evaluated the risks of infecting HCWs in Akbar hospital.

Materials and Methods:
This was a cross sectional study which was performed in this 4 months of staring COVID19 pandemic. Participants were asked by telephone about the risk factors associated with afflicting them to COVID19. The checklist was researcher-made.

Results:
In the period of study, 534 HCWs were positive for COVID19. The response rate in our study was 64.04%. The mean age of participants was 36.02± 8.5 years old and the mean of last episode from past common cold was 5.29± 5.21 months ago. Frontline HCWs were more than other HCWs and most of them were nurse. Having underlying disease was related to hospitalization (P=0.012). Malaise (269,78.7%), fever (233,68.1) and headache (189, 55.3) were the most common presentation in this ward.

Conclusion:
Frontline HCWs had a significantly increased risk of COVID-19 infection, highest among HCWs who had inadequate access to personal protective equipment (PPE).

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The Molecular Method in Diagnosis of Ocular Toxoplasmosis in Tehran

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ARTICLEINFO

Poster

Key words:
Complementary methods, DNG kit, PCR, Toxoplasma gondii.

ABSTRACT

Introduction:
Toxoplasmosisis one of the most prevalent parasitic infections which causes chorioretinitis that can be harmful to the vision. While *Toxoplasma gondii* is found throughout the world, more than 40 million people in the United States may be infected with the *Toxoplasma* parasite. *Toxoplasma* parasite can persist for long periods in the human body possibly even for a lifetime. Of those who are infected however, very few have symptoms as an efficient immune system usually keeps the parasite from causing illness. In this study, we evaluated the efficiency of molecular methods in the diagnosis of ocular *T. gondii.*

Materials and Methods:
blood samples were collected from major ophthalmology centers in Tehran and re-sampling was performed after 15 and 30 days. For *T. gondii* detection, after DNA extraction, PCR was conducted targeting B1 gene.

Results:
The result showed that among the studied blood samples, 47% of patients were positive for toxoplasmosis and in the second and third resampling 70% and 47% of patients were positive for this parasitic infection, respectively.

Conclusion:
We found that in addition to clinical diagnosis, complementary methods such as PCR can be employed for definite diagnosis.

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Deletion of Leishmania Major Gp63 Gene Using CRISPR-Cas9 as a Potential Method for Vaccine Production

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ARTICLEINFO

Poster

Key words:
CRISPR, Gp63, Leishmania,PX459, Vaccine.

ABSTRACT

Introduction:
CRISPR-Cas9 system is a powerful tool for gene editing with a wide range of applications, in this way creating an efficient vector structure is still of particular importance. The aim of this study was to construct a CRISPR-Cas9 plasmid to delete the gp63 gene of Leishmania major in the promastigote stage of the parasite.

Materials and Methods:
PX459 vector was used in this study. Two gRNAs named gRNA371 and gRNA871 were designed using https:// www.atum. bio/e Commerce/ cas9/input, respectively. First, the primers designed were hybridized using an annealing buffer. CRISPER PX459 vector was digested with the Bbs1 restriction enzyme and became linear. Further, Using the T4 ligase enzyme, gRNAs were ligated separately and then transformed into E. coli (DH5α competent cell).

Results:
Colony PCR was done then after confirmation of the plasmid extraction by specific and universal primers the extracted plasmid was sequenced. The result of sequencing was analyzed and shown that it was cloned correctly. The resulting plasmid structure was called Lesh-PX459.

Conclusion:
To maintain the quality and quantity of the Lesh-PX459 plasmid, which has 9200bp, manual plasmid extraction is recommended. The resulting structure is transfectable to the promastigote cell, which researchers will do in the next step.

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Prevalence of Extended-Spectrum β-Lactamase–producing Escherichia coli in Akbar Hospital, Mashhad

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ARTICLEINFO

Poster

Key words:
Akbar pediatric hospital, E. coli, ESBL.

ABSTRACT

Introduction:
Escherichia coli expressing extended-spectrum β-lactamase (ESBL) are among the most multidrug-resistant pathogens in hospitals and are spreading worldwide. These phenotypes cause infections that produced in poor outcomes, reduced rates of clinical and microbiological responses, longer hospitalization, and high hospital expenses. In this study, we evaluate prevalence of ESBL-producing E. coli in Akbar pediatric Hospital.

Materials and Methods:
E. coli isolates were collected from various ward of Akbar Hospital and then were approved based on morphological characteristics and biochemical tests. Antimicrobial resistance test was conduct by disc diffusion method according to CLSI guideline recommendations. For detection of ESBL isolates the difference between susceptibility zone of ceftazidim and ceftazidim+clavulanic acid was measured.

Results:
This is a retrospective analysis of all sample results for *E. coli* isolates in the hospital for the period 2019-2020. *E. coli* accounted for 24.2 of the hospital isolates (375/1552) during the study period. High resistance was seen to ampicillin (79.9%), sulfamethoxazole (71%), cefazolin (56.5%), and piperacillin, cefotaxime (56%). The antibiotics with least resistance were amikacin and piperacillin/tazobactam (4% and 3% respectively).

Conclusion:
Our results indicate that it is necessary to carefully monitor patients to determine whether or not they are infected with ESBL-producing *E. coli*.

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Bacteriological Profile and Antimicrobial Resistance Patterns of Blood Culture Isolates Among Patients in Akbar Hospital, Mashhad

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ARTICLEINFO

Poster

Key words:
Antimicrobial susceptibility pattern, Blood stream infection, Bacteriological profile.

ABSTRACT

Introduction:
The prevalence of resistance of blood borne isolates is increasing and it also varies in accordance with geographical and regional location. Keeping in mind the high mortality and morbidity associated with septicemia, right choice of empiric therapy is of importance. The aim of the present study was to determine the bacterial profile of bloodstream infections and their antibiotic susceptibility pattern.

Materials and Methods:
A total of 5009 blood samples from clinically suspected cases of bacteremia were studied at Akbar Hospital from September 2019 to September 2020. Antimicrobial resistance testing was performed and analyzed by Kirby Bauer technique on Mueller-Hinton agar plates using ten antibiotics according to their respective break points.

Results:
In this study 648 (12.9%) culture positive were isolated. Stenotrophomonas maltophilia 162 (25%), Staphylococcus epidermidis 116 (17.9%), Candida 23 (3.5%), Escherichia coli 16 (2.4%), Acinetobacter baumannii 13 (2%), Staphylococcus aureus 13 (2%), and Klebsiella pneumoniae 12 (1.8%) were the most dominant isolates. High resistance was seen to ampicillin/sulbactam (92.5), cefixime (89.6%), cefepime (89.5%), and cefotaxime and meropenem (86.9%). Resistance was lowest for ofloxacin (3.6%), ciprofloxacin (7.8%) and linezolid (8.3%).

Conclusion:
Prevalence of bacterial isolates in blood was high. It also reveals isolated bacteria species developed multi drug resistance to most of the antibiotics tested.

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Investigation of Acquired Immunodeficiency Virus (HIV) Infection in Patients with Tuberculosis in Mashhad (1389-1398)

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ARTICLEINFO

Poster

Key words:
HIV, Mashhad, Tuberculosis.

ABSTRACT

Introduction:
One of the major causes of high TB in a community is HIV infection, which in many advanced countries, along with other risk factors, is one of the most important factors in increasing the incidence of tuberculosis.

Materials and Methods:
All patients with tuberculosis were treated in Mashhad during 10 years (1389-1398). HIV screening was done based on blood samples and rapid test (SD Bioline HIV1&2).

Results:
Among all TB patients (8988), 64 patients had been infected with HIV (0.7%). 93.8% of them were male . Also, 93.7% were Iranian patients. 23.5% of the patients were prisoner. 87% of patients had pulmonary TB. The incidence of Pleural and lymph nodes tuberculosis was higher than the other types of extra-pulmonary tuberculosis. All patients were >15 years old. The results of treatment in patients with smear positive pulmonary TB were 65% successful treatment, 27.5% death and 7.5% failure treatment, but in other patients, these rates were 85.7% 8.3% and 3.2% respectively

Conclusion:
It was found that the prevalence of HIV-positive in tuberculosis patients in Mashhad is very low, and unlike many parts of the world. The success rate of treatment in HIV infected tuberculosis patients is 1.5 times lower than TB patients without HIV positive.

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In Vitro effects of Galbanic acid and Arsenic trioxide in MT-2 Cell line

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ARTICLEINFO

Poster

Key words:
Adult T cell leukemia, Arsenic trioxide, Combination therapy, Galbanic acid, Human T cell leukemia virus type 1.

ABSTRACT

Introduction:
ATL is a peripheral T cell neoplasm caused by HTLV-1. In the present study wee examined the impact of GBA in combination with Arsenic trioxide on MT-2 cell line.

Materials and Methods:
In order to determine the effect of the combination of GBA and ATO in MT-2 cell line, the MT-2 cells were treated with each agent alone at various concentrations. MT-2 cells were treated with the combination of 20 µ GBA and 4 µM ATO. Then the viability of MT-2 cells was evaluated by alamar blue assay and cell cycle distribution was assessed by PI flow cytometric assay. Furthermore, the activity of P-gp in the presence of GBA was studied by efflux assay. The gene expression of RelA, p53, c-MYC, CDK4, c-FLIPL, and c-FLIPS was measured by real-time PCR .

Results:
Our results indicate that GBA induces ATO cytotoxicity in MT-2 cells and enhances sub-G1 phase cells accumulation. GBA also inhibits P-gp efflux activity and downregulates the expression of CDK4, p53, c-FLIPL, and c-FLIPS in combination with ATO.

Conclusion:
The findings from our study might suggest that GBA in combination with ATO can be considered as a new therapeutic approach in the treatment of ATL.

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Effect of Helicobacter Pylori infection on IL-8 Expression in MKN45 cell line

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ARTICLEINFO

Poster

Key words:
H. Pylori, MKN45 cell line, IL-8, Quantitative real-time PCR

ABSTRACT

Introduction:
Helicobacter pylori is a major cause of chronic superficial gastritis, duodenal or gastric ulceration, and gastric adenocarcinoma. The gastric pathogen *H. pylori* is known to activate multiple proinflammatory signaling pathways in epithelial cells. This study aimed to investigate the induction of IL-8 by different *H. pylori* strains in the MKN45 cell line.

Materials and Methods:
Nineteen *H. pylori* strains which were isolated from biopsy specimens of dyspeptic patients with different histopathological status were selected. Fresh colonies of *H. pylori* were co-cultured with MKN45 cells for 1 and 6 hours. Then, the expression of IL-8 messenger RNA was measured by a quantitative real-time PCR.

Results:
Upregulation of IL-8 gene in MKN45 cell line was detected at ranges of 21.05 % (1 h) and 57.89 % (6 h). Downregulation of IL-8 was detected at ranges of 21.05 % (1 h) and 0 % (6h). The results indicated that the infection of MKN45 cells with H. pylori did not lead to an increase or decrease in levels of IL-8 messenger RNA significantly.

Conclusion:
Although our results did not show a significant upregulation of IL-8 gene, it was indicated the more co-culturing time between *H. pylori* and the epithelial cell, the more expression of IL-8.

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The Effect of Helicobacter Pylori on PAR-1 and PAR-2 Expression Levels in the Human Gastric Epithelial Cell

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ARTICLEINFO

Poster

Key words:
H. Pylori, MKN45 cell line, PAR-1, PAR-2, Quantitative real-time PCR.

ABSTRACT

Introduction:
Protease-activated receptors (PARs) mediate a variety of intracellular signaling, and subsequent cellular events caused by specific extracellular proteinases like H. pylori proteases. This study aimed to investigate the induction of PAR-1 and -2 by different H. pylori strains in MKN45 cell line.

Materials and Methods:
The colonies of 19 H. pylori isolated from biopsy specimens of dyspeptic patients with different histopathological status were co-cultured with MKN45 cells for 1 and 6 hours. Then, the expressions of PAR-1 and PAR-2 mRNA was evaluated by a quantitative real-time PCR.

Results:
While 10.52 % of the strains caused an increase in PAR-1 gene expression after both 1 and 6 hours co-culturing, no one of the strains could not induce PAR-2 gene expression after 1 h and with expanding co-infection time to 6 h, 15.78% of the strains induced PAR-2 expression. The results showed that the infection of MKN45 cells with *H. pylori* did not lead to an increase in levels of PAR-1 and -2 mRNA significantly.

Conclusion:
Our findings did not demonstrate significant expression alterations of PAR-1 and -2 genes in MKN45 cell line. Further studies are needed to investigate the possible role of H. pylori in the induction of PAR-1 and -2 in the human gastric.

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Investigation of Biofilm- Related Genes Among Clinical Isolates of Multidrug Resistant P. Aeruginosa

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ARTICLEINFO

Poster

Key words:
Bofilm production, P. aeruginosa, PFGE. susceptibility test. brlR, Pel.

ABSTRACT

Introduction:
Anti-microbial resistance and biofilm production are main features of *P. aeruginosa*. Several genes have important role in biofilm formation. This study investigates the relationship between genotypes and epidemiological phenotypes of the clinical *P. aeruginosa*.

Materials and Methods:
Fifty-nine clinical *P. aeruginosa* isolates were obtained. The biofilm formation was measured by microtiter plate. The prevalence of the genes was investigated by PCR. PFGE was used to evaluate phylogenetic analysis of antibiotic-resistant and biofilm producer isolates.

Results:
Prevalence of multidrug resistant isolates and biofilm producers was 68.75% and 81%, respectively. Comparison of dendrogram results from each PFGE banding patterns showed 13 distinctive restriction profiles out of 48(81.4%) isolates using an 80% similarity cut-off point. Among the selected gens, brlR and pel were significantly (P= 0.032, P= 0.044) related to phylogenetic pulsotypes. According to PFGE band patterns and prevalence results, it seems that there was a relationship between multidrug resistance and brlR gene among the isolates. In addition, pel gene was related to biofilm production. It was revealed 68.75% of MDR isolates had ≥80% phylogenetically similarity.

Conclusion:
The results showed that two important brlR and pel genes related to MDR and biofilm production were responsible for the persistence of hospital prolonged infections.