

## Infectious Diseases & Vaccination Abstracts

### Oral Presentation

#### Hepatitis B Vaccination Coverage among Iranian Children Aged 15-26 Months Old; 2006

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**Objectives:** There are few data about hepatitis B vaccination coverage especially at national level in Iran and the last one was reported in 1997. We conducted this study to estimate the coverage of hepatitis B vaccination at national and sub national (universities' covered population) level in Iran.

**Methods and Subjects:** 210 15-26 months old children were selected from each 3 universities covered area in Iran during the study period (2006), from 41 medical universities and health services, that was defined according to immunization services status, urban, rural and remote areas. We used cluster sampling method and defined 30 clusters with 7 eligible participants in each area. We used systematic random sampling method. A structured questionnaire including socio-demographic and vaccination status data was completed for each of the selected subjects. Proportions and 95% confidence intervals were calculated using SPSS ver. 13 and STATA ver. 8/SE software.

**Findings:** 21905 children were recruited in the study. Mean and standard deviation of the children age was 20.6±3.5 months and male to female ratio was 1.09. The urban, rural and remote population proportions were 41.5, 39.5 and 19.0 percent, respectively. Card only based hepatitis B (HBV1, HBV2, HBV3) vaccination coverage in 14, 15 and 10 of 41 university areas was 100%, respectively. National level of HBV1, HBV2 and HBV3 coverage were 98.9, 98.8 and 98.4 percent, respectively. The drop-out rates for 2nd and 3rd dose of HBVs 0.1 and 0.4 percent. Either card or history based HBV1 and HBV2 vaccination coverage in most university areas was

100% but vaccination coverage of HBV3 in 16 university areas was 100%; Hormozgan had the lowest one (97%).

**Conclusion:** The Results of this survey showed that the HBV immunization coverage rate of Iranian infants in the urban, rural and remote areas were at least 90.7%. The drop-out rates were very low (not higher than 0.5 percent).

**Key Words:** Hepatitis B; Vaccination coverage; Prevention

### Oral Presentation

#### Measles Elimination Achievement after MR Mass Campaign Immunization in Iran

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**Objectives:** Measles is one of the most ancient communicable diseases which cause periodic epidemics 2-5 years in pre-vaccine era. Burden of measles has been decreased by improvement of health care services and immunization coverage in Iran. Epidemiological feature of measles significantly changed after MR mass campaign in 2003 and this study wants to describe it.

**Methods and Subjects:** This was a retrospective descriptive study which considered explaining epidemiology of measles during 2004-2008 in Iran. According to the national measles guideline definitions, all suspected measles cases reported to the Center for Communicable Diseases Control and serum specimens for detection of IgM, were sent to the reference lab in less than 1 week. Data analysis has been done by SPSS software.

**Findings:** Total number of 4326 measles suspected cases were reported to CDC in the study period. The highest frequencies were reported from Mashhad (539), Fars (475) and Mazandaran (213) provinces. Out of total cases only 103 cases were confirmed by laboratory (incidence rate: 0.3 per 1 million population) and 61% were less than 10 years children. The highest incidence rates of lab confirmed cases were due to south eastern provinces. Almost 80% of the whole lab confirmed cases were seen in foreign patients. Age distribution of lab confirmed cases was 11.7% in less than 1y, 33% in 1-4 y, 19.4% in 5-9 y, 4.9% in 10-19 y and 31% in more than 20 y.

**Conclusion:** The measles elimination program has been achieved after MR mass campaign and incidence rate is being less than expected rates by World Health Organization (less than 1 per 1 million population). Due to high prevalence of measles in the eastern neighboring countries and huge traveling to Iran, main proportion of confirmed measles patients were from those countries and shows crucial need to supplementary immunization of them.

**Key Words:** Epidemiology; Measles; Immunization

#### Poster Presentation

### A Study of Lower Respiratory Tract Infection by Respiratory Syncytial Virus in Infants and Young Children

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**Objectives:** Respiratory syncytial virus (RSV) is the single most important cause of lower respiratory tract infection (LRTI) in infants and young children. The characteristic feature of RSV is severe infection in infants but mild in adults. RSV is found in all parts of the world and outbreaks in cold seasons are associated with an increase in hospitalization of children and deaths from LRTI, so the diagnosis of virus at an early stage is very important specially in order to avoid improper drug therapy. The aim of our study was to evaluate LRTI caused by RSV in infants by using non-cultural method.

**Methods and Subjects:** In a prospective study to evaluate the lower respiratory tract infections, 252 children with respiratory symptoms and sex, age matched 152 children without any respiratory symptoms (1-28 months age) were randomly selected as case and control groups, respectively and were studied for the detection of RSV antigen by immunofluorescent method.

**Findings:** Sixty two samples (24.6%) from case group and single control group sample (0.65%) were positive for RSV antigens. Statistical analysis showed meaningful correlation between two groups ( $p < 0.05$ ). High prevalence of RSV infection was seen among children between 1-6 months age group and during the month of December. Results of this study showed that the most important clinical features in RSV positive patients were pneumonia (31%), bronchiolitis (55%), wheezing (41%), cyanosis (46%), signs of allergic skin disorders (8%) and conjunctivitis (9%). Statistical analysis didn't show any meaningful correlation between the socio-economic status and education of these two groups.

**Conclusion:** RSV virus is significant in younger children because it may cause lower respiratory tract

infection, and in the presence of certain disease and factors it has been known to cause respiratory failure. Lower respiratory tract infections caused by respiratory syncytial virus can be rapidly diagnosed by fluorescent antigen test.

**Key Words:** Respiratory syncytial virus; Pneumonia Bronchiolitis

#### Poster Presentation

### Review Elimination of Index Care Measles during the Years 2007-2009 in Isfahan

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**Objectives:** Measles disease is endemic in large communities and every 3 - 5 year due to gathering of susceptible people an epidemic will create. This disease is the eighth cause of mortality in the world. One million children will kill by this disease annually. The purpose of review care index is elimination of measles, Review patient access indicators, Report to health system, preparation and sending samples and identifying sources of disease and also is in order to identify and review areas of weakness and provide suitable solutions to solve problems to achieve the care index.

**Methods and Subjects:** This study is a descriptive, analytical and retrospective study gathered by sending samples and information from health centers and hospitals and analyzed by SPSS software.

**Findings:** Limit disease in 2007 was 81 cases that 61 cases (75.30%) have accessed and in 2008 limit of disease was 83 cases and 39 cases (46.98%) have accessed. Timely report to health system within 48 hours after the occurrence of rash in 2007, has been 71% and in 2008 has been 64% and in review the cases within 48 hours after the report in 2007 it has been 100% and during 2008 it has been 97%. Samples sent within 3 days of preparation date by the year 2007, has been 35% and in 2008, 29%. In Vaccination records of suspected measles 30% people have no vaccination's record. Most units to report suspected cases are health centers 49% then 22% private clinic and home health is 14%.

**Conclusion:** In Care review in order to eliminate measles disease, it is required to screen two percent of the population of thousands of University of Medical Sciences in Isfahan who are diagnosed with fever and rash during a year until we reach the purpose. Limit disease in 2008 has had a clear downfall. We have reached our purpose in timely reporting index and review the cases but in index of transferring sample we have distance from the

purpose and are required to have the measures in this area. According to Source index report most cases relates to health centers. Reduction the detection limit in 2008 is due to reference more patients to the private sector (According to the statistics of patients visiting in health centers) and lack of fever and rash cases reported by the private sector

**Key Words:** Epidemiologic; Measles; Vaccination;

#### Oral Presentation

### Multiple Organ Involvement Hydatid Cysts in a 12-year-old Boy

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**Objectives:** The Multiple Organ Involvement: cerebral, heart, kidney, periumbilical hydatid cysts caused by *Echinococcus granulosus* are rare and occur mostly during childhood in endemic areas.

**Case Presentation:** A 12-year-old boy was admitted to Children Medical Center with focal neurological signs in the left extremities. Findings of a Spiral brain CT- scan with contrast media were large multilocular cystic lesion about 70x65 mm in right temporal lobe with some mass effect over the adjacent structures and ipsilateral ventricle was noted. Two other smaller similar cystic lesion was noted in centrum semiovale bilaterally no evidence of pathologic enhancement around mentioned lesion or any calcification seen. Effacement of ambient cistern also was seen. Considering the findings of cerebral hydatidosis most likely suggested that temporal lesion has more than expected mass effect for hydatid cyst. Spiral abdominopelvic CT Scan without and with contrast media was done. Thickening of interventricular septum of the heart with cystic attenuation small about 10 mm cortical cyst in the left kidney was seen. About 20 mm cyst medial to the cecum was noticed. Findings of echocardiography were good systole and diastole function with a 2x2 hydatid cyst at apical and interventricular septum. The cerebral hydatid cyst was surgically extracted. Findings of Axial Spiral CT-Scan of brain without contrast media were Post operative changes and craniotomy and subdural and mild epidural effusion was seen. Multiple round/hypodense lesions in right temporal/right frontoparietal/left parietal / right thalamus and posterior portion of left lateral ventricle were seen which are due to multiple hydatid cysts. Posterior fossa was unremarkable.

**Conclusion:** Hydatid disease is endemic in Iran. We suggest that a differential diagnosis of hydatid cyst should be considered when a brain mass is found in a young patient, from an endemic area of *echinococcus* and evaluation of total body organs may be considered.

**Key Words:** Hydatid cyst, *Echinococcus granulosus*, Multiple organ Hydatidosis

#### Poster Presentation

### Epidemiological Aspects of Rotavirus Induced Diarrhea in less than 5 Years old Children in Iran, 2006-8

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**Objectives:** Rotaviruses are one of the most prevalent causes of diarrhea in both developing and developed countries. According to WHO estimation for 2004, between 661 and 878 child deaths due to Rotavirus infection occurred in Iran which constitute approximately 26% of child diarrhea deaths and 1.6% of the estimated child deaths. There was some scattered studies before establishing rotavirus surveillance system, which weren't enough for conclusion.

**Methods and Subjects:** The rotavirus surveillance system was started from March 2006 in Iran in five hospitals as sentinel sites. These hospitals were in Shiraz, Tabriz, Mashhad, Bandar-Abbas and Tehran. All acute watery diarrheal cases in less than 5 years old children whom admitted in these hospitals were included in our study. Stool specimens were tested by EIA kits which provided by the World Health Organization.

**Findings:** Total number of less than 5 years admitted children in the hospitals were 67572. Numbers of suspected cases of rotavirus gastroenteritis (meeting case definition) were 7312 out of 12029 diarrheal cases (61%). 4730 cases randomly tested by EIA test which were positive in 2477 cases (52%). Median age was 12 months. Male/female ratio was 61/39. Peak age of cases was 6-11 months. The highest incidence rate in Iran was in January. Treatment in cases was ORT in 33%, IVF in 38% and 29% mix treatment with both. No mortality reported in rotavirus positive cases.

**Conclusion:** Rotavirus induced diarrhea is a very common disease in young children in Iran. Although burden of diarrheal diseases has been significant decreased in recent decades due to improvement in sanitation and better accessibility to the safe water and food, but rotaviruses lonely are the most

prevalent agent of diarrheal diseases in young children whom admitted in the hospitals. According to these findings immunization of infants should be reviewed by Ministry of Health.

**Key Words:** Epidemiology; Rotavirus; Diarrhea; Iran

#### Oral Presentation

### Prevalence of Guillain-Barre Syndrome in under 15 Years Old Children, Based on Acute Flaccid Paralysis Surveillance System in Iran, 2006-8

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**Objectives:** Acute Flaccid Paralysis (AFP) surveillance system has the responsibility of detection and classification of AFP cases at national level. Final diagnosis of all discarded cases as non-polio is determined by provincial expert groups (classification committees). Percentage of Guillain-Barre syndrome (GBS) cases detected by this system can be used as an indicator for quality. (In absence of poliomyelitis, GBS accounts for more than 50% of AFP cases).

**Methods and Subjects:** Besides the epidemiologic investigation of AFP case and his/her households, the index case is followed by virologic stool exams for wild poliovirus isolation and clinical exam for 60th day residual paralysis. Those patients who, based on negative culture results or having no residual paralysis or judgment of expert group, are discarded as non-polio AFP case, will have their final diagnosis. Expert groups are composed of pediatricians, infectious disease specialists, epidemiologists and Neurologists. All differential diagnoses made by these committees during 2006-8 will be reviewed in this article.

**Findings:** The following table shows the final diagnoses of non-polio AFP cases during 2006-8. Year 2006, 2007 and 2008 number (No) of AFP cases were 493, 561 and 561 and No. of GBS cases were 248, 297, and 334, respectively. The percent of GBS cases 50.3%, 53% and 59.5%, respectively. Number of transvers myelitis were 9, 10, and 7 and No. of traumatic neuritis were 4, 6, and 2, respectively. Other diagnoses were 236, 247, and 217 and unknown 0, 1, and 1, respectively. Non-polio AFP rate were 2.9%, 3.2%, and 3.1%, respectively. GBS per 100,000 < 15 y/o were 1.45 1.68 1.85, respectively.

**Conclusions:** The above findings show that AFP surveillance system in Iran is competent enough to reach the expected non-polio AFP rate ( $\geq 2$ ) and expected percent of GBS ( $\geq 1$ ).

**Key Words:** Acute flaccid paralysis; Poliomyelitis; Guillain-Barre Syndrome

#### Oral Presentation

### Determination of Vancomycin Resistant Enterococci Carriage, Molecular Epidemiology and the Related Risk Factors in Children with ALL in Tehran, Iran

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**Objective:** Vancomycin resistant enterococcus in immune deficient patient is a significant factor for increase in morbidity and mortality. The aim of this paper was to determine VRE carriage rate and its molecular epidemiology and to identify risk factors for acquisition of VRE in children with ALL in Iran.

**Methods and Subjects:** In a cross-sectional study, stool samples of children with ALL in Aliasghar and Mahak hospital randomly were analyzed for detection of VRE. All isolates were sent to a reference center for further investigation. Enterococci were identified by conventional methods and vancomycin resistance was detected by disk diffusion method and E-test. Van gene characterization was performed by a multiplex polymerase chain reaction (PCR), which also confirmed the identification. Questionnaires of patient was done to determine the risk factors.

**Findings:** In the present study, of 130 children with ALL admitted to our hematology/oncology an infection units, 33 of the 130 patients were colonized with VRE (25.3%) (cases) and 62 patients were colonized with vancomycin-sensitive strains (VSE), serving as controls. 26 isolates (78.8%) of VRE were detected with VanA phenotype and seven isolates (21.2%) with VanB phenotype. In the univariate analysis history of ICU admission ( $P=0.03$ ) was significantly associated with Enterococcus colonization and had a trend with VRE colonization. Age ( $P=0.007$ ) was significantly associated with VRE phenotype. There was no significant relationship between gender, duration of disease, number of admission, another disease, history of severe neutropenia among one month ago and history of antibiotic use in three months ago and VRE colonization.

**Conclusion:** Our study, the first of VRE carriage in children with ALL, demonstrates that VRE prevalence is high in children with ALL in Iran and indicating a prompt intervention strategy in the control of VRE particularly in PICU.

**Key Words:** Vancomycin resistant; Enterococci; Leukemia; Children

#### Oral Presentation

### Evaluation of Approach to Fever without Localized Sign in Madani Children's Hospital

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**Objectives:** Fever is the excise of body temperature over 38 due to excise of temperature in hypothalamus; fever without focus is a fever that we can't find localized source in history or examination but lab test is useful for last diagnosis. Fever without source almost always happens because of transient bacteremia so the don't need any special treatment. The goal of doing this proposal was understanding mismanagement of fever in child.

**Methods and Subjects:** In this study, 95 children 3-36 months age from 1382-1386 with primary diagnosis of fever which admitted to hospital were analyzed by independence kie square test.

**Findings:** Prescription of third generation cephalosporin in younger group was more than other groups, which was about 95.8% in the group lower than 12 months and 38.5% in 24-36 months. Only in 60% of the referred children daily physical examination was done and in 87.3% of children which had good appearance and in 100% children which were toxic prescription of drug was continued up to dismiss. Cerebrospinal fluid was tested in 42.9% toxic appearance children which had temperature upper than 39 and in 29.3% children which had temperature lower than 39, had negative blood culture and antibiotic therapy was continued.

**Key Words:** Fever without source; Bacteremia; Fever

#### Poster Presentation

### Layout of a Fuzzy Expert Package to Predict the Neurtropic Effects of HIV

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The difficulty of invivo (cellular, animal, and human) and invirto studies shift us to use computers for predicting the studies and projects just like other fields of sciences, for example aerological prediction or prediction of earthquake. Expert systems (especial package with artificial intelligent ability) slowly

succeed experts, but a large problem that inhibits this succession is the uncertain thinking (fuzzy) of human brain. After 1965 when Prof. Zadeh explained fuzzy sets, application of this new theory developed in practical sciences. In fuzzy logic, we not only can handle true and false, [0,1], and completely true and completely false but also we can handle partial true and partial false [0, 0<=m<1, 1]. With the use of fuzzy logic and object oriented programming (C++) we would dye design of a package that can predict widespread effect and injuries of this high nerotropic virus (HIV) on nerve cell, in both CNS and peripheral nervous system. Of course, this one can also predict effect of other opportunistic infections on neurons with little of change.

**Key Words:** HIV; Fuzzy logic; Intelligent systems

#### Poster Presentation

### Comparison of Thyme (thymus vulgaris) Extract and Diphenhydramine in the Treatment of Children's Common Cold Induced cough; a Double Blind, Randomized, Clinical Trial

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**Objectives:** The common cold is caused by various respiratory viruses, most commonly a rhinovirus. There are lots of home-made preparation from indigenous herbs for colds treatment that are weakly evaluated. Among this medication both from OTC and home-made preparation, Thyme (thymus vulgaris) is a good example.

**Methods and Subjects:** We conducted this study to compare the Thyme (thymus vulgaris) extract syrup and Diphenhydramine in the treatment of children's common cold induced cough, within a double blind, randomized, placebo – controlled trial, a total of 52 children with common cold enrolled. The patients were randomly allocated to one of two treatment groups and received either the commercially available antitussive diphenhydramine compound or Thyme (thymus vulgaris) extract syrup for five days. Parents were asked to complete a questionnaire about the severity of their children's cold – related symptoms and the efficacy of each drug seven days later. This questionnaire contained these parameters: induction of sedation and sleepiness, four –point scale of cough status and two – point scale of consumption convenience.

**Findings:** Our Results showed that sedation and sleepiness were 30.8 and 19.2% in diphenhydramine and Thyme groups, respectively (p=0.54). Also 65.4 and 84.6% in diphenhydramine group, Cough status statistically improved (p=0.036) in our Thyme group.

**Conclusion:** the results of this trial confirmed the efficacy and safety of the thyme remedy in the treatment of the common cold cough in children.

**Key Words:** Common cold; Thymus Vulgaris; Cough; Children

#### Oral Presentation

### Efficacy of Subcutaneous Epinephrine Versus Nebulized Salbutamol in the Emergency Department Treatment of Bronchiolitis

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**Objective:** By age 2 yr 50% of children have been infected with bronchiolitis, with severe disease more common among infants aged 1–3 months. Despite wide spread use of nebulized B2-agonists in infants with bronchiolitis since the late 1950s, the efficacy of these drugs remains unproven. Statistical improvement in clinical scoring systems seen with the use of beta agonists is not always clinically significant, and desaturations have been reported after salbutamol nebulization. Epinephrine hydrochloride is being used with increasing frequency in bronchiolitis. Subcutaneous administration of it may produce its effects within 10 minutes and maximal effects in about 30 minutes. Aim of the study was determination efficacy of S.C Epi. versus Neb. salbutamol in the Emergency Department treatment of patients (age 2 years or less) with bronchiolitis.

**Methods and Subjects:** Two hundreds patients less than 2 years of age with a clinical diagnosis of bronchiolitis were enrolled in a prospective, randomized and controlled study to receive either subcutaneous epinephrine (N=100) or nebulized 0.5% salbutamol sulfate (N=100). This study was done in the Emergency Department of Babylon maternity and children teaching hospital. Study enrollment occurred in sequential winter season from first of September 2007 to first of March 2008.

**Findings:** There is a high significant improvement in O2 saturation at 30 and 60 min., in respiratory rate at 60 and 90 min., heart rate improvement at 60 min. and better improvement in the wheeze, chest retraction, nasal flaring, and reduced rate of admission to the wards in patient who were treated with subcutaneous epinephrine than those who were treated with nebulized salbutamol.

**Conclusions:** The response to subcutaneous epinephrine in patients younger than 12 months was better than older patients. Subcutaneous epinephrine improves the clinical manifestation and parameters of respiratory distress with maximum effectiveness at 30-60 min. Subcutaneous epinephrine decreases the

load of patients on E.D and reduces the rate of admission to the wards in comparison with nebulized salbutamol.

**Key Words:** Bronchiolitis, Epinephrine, Salbutamol

#### Oral Presentation

### Nasal Carriage of Methicillin Resistance Staphylococcus Aureus and their Antibiotic Susceptibility Patterns in Children Attending Day-care Centers

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**Objective:** Nasal colonization with community acquired methicillin resistance staphylococcus aureus (CA-MRSA) is being increased specially in location that people are in close contact and hygiene is lacking such as day care centers but there is a general lack of data on MRSA colonization in children in day care centers. In this study, we investigated the frequency of methicillin susceptible staphylococcus aureus (MSSA) and MRSA colonization and their antibiotic susceptibility in 1-6 years old children of day care centers in Hamadan, Iran.

**Methods and Subjects:** 500 nasal swabs were obtained from children of 27 day care centers that had no risk factor for colonization by *S. aureus*. The specimens were cultured for isolation of *S. aureus* by standard methods and we assessed antibiotic susceptibility patterns by disk diffusion method with oxacillin, cefazolin, trimethoprim–sulfamethoxazol, erythromycin, clindamycin and vancomycin antibiotics. For evaluation of the frequency of erythromycin induced clindamycin resistance we used disk approximation test (D-test).

**Findings:** Totally, 148 (29.6%) cases were colonized with *S. aureus*. Out of 260 males, 94 (36.2 %) and of 240 females, 54 (22.5 %) cases were nasal carriers of *S. aureus* ( P value = 0.001). Six (4.1%) of the 148 *S. aureus* isolated from children were MRSA. None of MRSA and MSSA was resistant to vancomycin and clindamycin and just one case (16.7%) of MRSA isolates was resistant to trimethoprim–sulfamethoxazol. Three (50%) strains of MRSA and 7(4.9%) of MSSA were resistant to erythromycin and D-test were positive in all of them.

**Conclusion:** We conclude that the rate of colonization by *S. aureus* is high in children attending day care centers and colonization with MRSA is not uncommon. Clindamycin or trimethoprim–sulfamethoxazol can be used in mild to moderate diseases caused by CA-MRSA, however if the CA-MRSA isolates were erythromycin resistant it is necessary that D-test be done for detection of inducible clindamycin resistance.

**Key Words:** Nasal carriers; Methicillin resistant Staphylococcus Aureus; Day-care centers

#### Poster Presentation

### Determination of the Relative Frequency of Rotavirus & Adenovirus among the Children aged one Month to 5 Years Old Hospitalized with Acute Diarrhea in Aboozar Hospital during One Year

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**Objective:** More than three million children in developing countries die from acute diarrhea annually. Defecating more than 3 times a day or more than 10 gr/kg/day is considered diarrhea in infants and children and acute diarrhea is a condition of diarrhea that lasts less than 2 weeks. Rotaviruses and adenoviruses are the most important etiologic factors in acute gastroenteritis of children. This study was done to assess viral agents in children with acute diarrhea, admitted in Aboozar Hospital of Ahvaz.

**Methods and Subjects:** In a descriptive cross-sectional study during 1 year, 180 patients (under 5 years old) between 1-60 months that were admitted in Aboozar Hospital in Ahvaz with diagnosis of acute diarrhea in 2007, were studied. Stools were examined using ELISA kits for adenoviruses and rotaviruses. Then positive cases were analyzed with clinical findings, the age of patients, sex, season, kind of diet, residence (urban, rural), and the state of mother education with a questionnaire.

**Findings:** From 180 children in our study, the boys were 104 (57.8%) and the girls were 76 (42.2%) with the mean age of 12.86 months (1-60 months) that 63 (35%) had rotavirus infection (mean age 11.57 month) and 6 (3.3%) had adenovirus (mean age 8.17 month). From all of patients, (28.3%) 51 were living in rural locale and (71.7%) 129 were urban. As to seasonal distribution, (19%) 12 cases had occurred in spring, (17.5%) 11 in summer, (38.1%) 24 in autumn and (25.4%) 16 in winter. So prevalence of rotavirus infection was more common in winter and autumn ( $P=0.012$ ). There was a significant relationship between acute diarrhea and sex ( $P=0.044$ ) that shows the affection in boys were more than girls. In addition, there were no significant relation between sex with etiologic factor ( $P=0.96$ ).

**Conclusion:** This survey showed the high incidence of rotavirus infection (35%) among children with acute diarrhea, especially less than 2 years old. It seems that using an appropriate vaccine can effectively prevent diarrhea in target population. It

also confirmed that antibiotic over-prescription can be withheld by laboratory diagnosis of viral agent.

**KeyWords:** Acute Diarrhea, Rotavirus, Adenovirus, ELISA, children

#### Oral Presentation

### Role of West Nile Virus in childhood encephalitis in Mashhad, Iran

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**Objective:** Encephalitis is a serious disease with high incidence of complications. In Eastern Mediterranean region of WHO, there are few studies about pediatric encephalitis. We couldn't find any study (except case reports) about this topic in Iran.

**Methods and Subjects:** This is an observational prospective study (from Dec-30-2005 up to Jun -19-2006) in which all children (2 months to 15 years old) with diagnosis of encephalitis who were admitted in Educational hospitals of Mashhad were evaluated. For Laboratory confirmation of etiology of cases we used HSV PCR (of CSF samples), PCR and IgM, IgG (of serum sample) for West Nile Virus and serologic testes (of serum sample) for brucella. Post Infectious Encephalitis has been diagnosed clinically (based on occurrence of encephalitis 3 days to 3 weeks after an obvious infectious disease like chicken pox, Mumps)

**Findings:** There were 21 encephalitis cases (13 boys and 8 girls) with mean age of 6.4 years, 48% of them were Mashhad residents. Most (75%) of the cases (11 of 15 cases which occurred in one year) were presented in fall and winter. We could find the etiology of encephalitis in 11 (50.2%) cases, 10 cases of them were post infectious (6 post chicken pox, 1 after viral parotitis, 1 after nonspecific rash and fever and 2 after nonspecific respiratory infection) and one was a brucella encephalitis, there was a suspicious herpetic and a probable mycoplasma encephalitis, too. Herpetic and West Nile encephalitis were ruled out in 81% and 76% of patients, respectively (by negative PCR or serology or clinically). Brain CT, Brain MRI and EEG were abnormal in 50%, 80% and 100% of the cases, respectively for whom these procedures were done. Seventeen patients were followed for 6-18 months after discharge, 43% of them had complete recovery, 52.5% had neurologic sequela and 4.5% expired.

**Conclusion:** Post Infectious Encephalitis is the most common cause of encephalitis in children of our district. We couldn't confirm any case of West Nile Virus Encephalitis in our cases.

**Key Words:** Encephalitis; West Nile Virus; Post infectious; Children; Mashhad

Oral Presentation

### Is BCG Vaccine Scar, Necessary for Confirmation of Immunity against Mycobacterium Tuberculosis Infection?

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**Objectives:** Comparison of Gamma Interferon response to human PPD, BCG vaccine, Pure BCG Ag in scar negative and scar positive BCG vaccinated children.

**Methods and Subjects:** Between August 2006 and May 2007, a total of 236 children aged 1 month to 168 months (mean 21 months) admitted to different wards of Mofid children hospital and met the inclusion criteria, which were enrolled in a cross sectional study with sequential manner. Each patient was evaluated for BCG vaccination, examined for BCG vaccine scar and then tested with both Tuberculin skin Test (TST) and Interferon Gamma release assay (IGRA).

**Findings:** From 236 patients, (40% female, 1-156 months, mean age of 42 months) 15 patients were scar negative. All patients with negative scar were TST negative. In this group, human PPD based IGRA was positive in 10 (66.7%), and negative in 4 (26.7%) and indeterminate in 1 (6.6%), respectively. Whole BCG based IGRA was positive in 8 (53.3%), negative in 2 (13.3%) and indeterminate in 5 (33.4%), respectively. Pure BCG Ag based IGRA was positive in 12 (80%), negative in 1 (6.6%) and indeterminate in 2 (13.4%), respectively. 221 of cases (44% female, 1-168 months, mean age 21 months) were scar positive. 5% and 95% of scar positive cases were TST positive and negative, respectively. From total of scar positive patients, the human PPD based IGRA was positive in 110 (49.8%), negative in 85 (38.4%) and indeterminate in 26(11.8%), respectively. Whole BCG based IGRA was positive in 121(54.7%), negative in 64 (29%) and indeterminate in 36 (16%), respectively. Pure BCG Ag based IGRA was positive in 136 (61.5%) negative in 57 (25.8%) and indeterminate in 28 (12.7%), respectively. There was no significant statistically distinction between scar positive and negative groups in TST and IGRA results.

**Conclusion:** It seems that immunity against mycobacterium tuberculosis in scar negative children does not relate to scar formation and may be better evaluated with a more accurate tool such as IGRA than contenting with scar formation alone.

**KeyWords:** BCG vaccine; IGRA; Mycobacterium tuberculosis

Oral Presentation

### Atypical Manifestations of EBV in Four Patient

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**Background:** Epstein barr virus is a gamma herpes virus and one of the most common human viruses. Involvement range from asymptomatic to fatal infections; typical clinically- manifestations include fever, exudative pharyngitis lymphadenopathy, hepatosplenomegally. Atypical lymphocytosis is common.

**Case Presentation:** In this study, four patients are presented who referred with rare and atypical manifestations such as server anemia, thrombocytopenia, and acute abdomen. The clinical pictures of the patients were so obscure and strange that preliminary diagnosis included typhlitis due to malignancy in one patient, ITP in second one, GI hemorrhage and suspected IBD in third, abdominal pain and diagnosis of appendicitis in fourth patient. It is of interest that low level of vitamin D was detected in three patients who had been checked for that.

**Conclusion:** Rare manifestation such as anemia, thrombocytopenia, abdominal pain, must give suspicion to epstein barr virus infection.

**KeyWords:** Epstein barr virus; Thrombocytopenia; Abdominal pain; EBV; Anemia

Poster Presentation

### Efficacy of HBV Vaccination in Children with Thalassemia Major-South Khorasan, Iran

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**Objectives:** Thalassemia patients are more susceptible to hepatitis than the normal population due to the frequent blood transfusion. This study was performed to determine the immune response of children with major  $\beta$ -Thalassemia, by measuring anti-HBS antibody following the last HBV vaccine injection.

**Methods and Subjects:** This study was carried out on all of thalassemic children who were under the care of thalassemia foundations (38 cases) in Birjand that received three standard intramuscular recombinant HBV vaccines. Mean children age was  $9.2 \pm 4.6$  years. Based on the time lapsed since last vaccine injection the subjects were divided into two groups:  $\leq 5$  years,  $>5$  years. Based on the serum level

of anti-HBS-antibody subjects were categorized as: good responders (anti-HBS > 100 IU/lit), low responders (anti-HBS 10-100 IU/lit) and non responders (anti-HBS < 10 IU/lit).

**Findings:** The mean range of anti HBS level in the above mentioned groups were 99.7 IU/lit, 43.3 IU/lit, respectively. Out of 38 individuals 13 (34.2%) were good responders, 9 (23.7%) low responders and 16 (42.1%) non responders.

**Conclusion:** Standard HBV vaccination in thalassemic children results in an immune response in 57.9% of subjects. Therefore, assessment of anti-HBS-antibody 5 years after the last vaccination is recommended.

**Key Words:** Anti-HBS-antibody; Thalassemia; Vaccination

#### Oral Presentation

### Causes of Acquired Neutropenia in Hospitalized Children, a Two Year Study

**Ali-Akbar Rahbarimanesh, MD; Mohammad-Ali Ehsani, MD; Peiman Salamati, MD; Ali Abdollahi**

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**Objective:** A wide spectrum of diseases from life threatening to benign and transient diseases with less clinical significance may cause neutropenia. Infectious, hematologic and oncologic diseases are the major causes of secondary or acquired neutropenia. The aim of this study was investigating the causes of neutropenia in Infectious Ward (IW) and Hematology Oncology Ward (HOW) at Bahrami hospital.

**Methods and Subjects:** During a two-year period, all neutropenic children without underlying disease who were hospitalized at IW and HOW, were evaluated. The data about their age, gender, absolute neutrophil count (ANC), and diagnosis were analyzed.

**Findings:** 284 neutropenic children were identified, 117 cases at IW (frequency: 5%), and 167 cases at HOW (frequency: 10.92 %). The mean of age at IW was 1.77 years and 76.1 % of them were under 2 years old. At HOW, the mean of age was 7.67 years. The mean of ANC at IW was 1074.53 and at HOW was 641.77 ( $P < 0.001$ ). At IW, 65% of patients had mild neutropenia but nobody was in very severe group. At IW, cause of neutropenia were viral infections (67.5%), bacterial infections (30.8%), and protozoal infections (1.7%). The most common diseases at this ward were Gastroenteritis (33.3%), Bronchiolitis (21.4%), and upper respiratory infections (16.2%). The most common diseases were ALL (52.7%) and NHL (16.2%).

**Conclusion:** At IW viral infections were the most common cause of secondary neutropenia. Moreover,

in comparison with hematologic diseases, infectious diseases were leading to milder neutropenia ( $P < 0.001$ ) and the neutropenic patients were younger ( $P < 0.001$ ).

**Key Words:** neutropenia, children, infectious disease, hematologic disease, malignancy

#### Oral Presentation

### The First Study of Molecular Epidemiology of Human Respiratory Syncytial Virus in Iran

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**Objectives:** Human respiratory syncytial virus (HRSV) is recognized as the most important viral agent of serious respiratory tract diseases in the pediatric population. Two major antigenic groups (A, B) of HRSV exist and viruses from both subgroups can cocirculate during epidemics.

**Methods and Subjects:** The molecular epidemiology of HRSV in Iran was done by reverse transcription PCR for C-terminal region of the G-protein gene with throat swabs which were collected in 2007-2008.

**Findings:** Phylogenetic analysis of 14 HRSV positive samples revealed that genotypes of subgroup A [(11), (1), (1), (1)] were circulating during this time whereas any genotype of subgroup B was not identified.

**Conclusion:** Our molecular analysis of HRSV confirmed that multiple genotype cocirculated each year and also revealed the genotype was predominant genotype in 2007-2008.

**KeyWords:** Human respiratory syncytial virus; HRSV; Molecular epidemiology; Genotype: Iran

#### Oral Presentation

### Evaluation of Group B Streptococci Colonization rate in Pregnant Women and Pregnancy Outcome (Newborn)

**Abdulkarim Hamed, MD; Farideh Akhlaghi, MD**

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**Objective:** Group B streptococcus (GBS) is one of the most important bacteria in the majority maternal and neonatal infections. In addition, this microorganism cause severe infections such chorioamnionitis, endometritis, bacteremia, septicemia and neonatal meningitis in mothers and neonates. GBS screening is one of the recommended strategies that has been mentioned by (CDC) during

pregnancy. Taking the importance of the issue in to our consideration, we decided to study the percentage of colonization of the microorganism in mother and neonate and its probable outcomes in order to show responsible factors and frequency of the colonization and its outcomes and more over to recommend practical approaches towards prevention of this infection.

**Methods and Subjects:** 200 pregnant women who were admitted at the Ghaem Hospital, were involved in the study, the information of mother and neonate were mentioned in the questionnaire and cultures were taken from vaginal secretions of mother during delivery and secretions of umbilical cord in the post partum period.

**Findings:** The colonization in the studied pregnant women and neonates were reported 6% and 5%, respectively. All mothers of neonates who carried GBS were in the group of GBS carriers and all of them had premature rupture of membrane (PROM) 18 hours before delivery.

**Conclusion:** There is a meaningful relationship between maternal and neonatal GBS colonization and more over 80% of neonates among GBS carrier mothers were colonized by GBS.

**Key Words:** GBS; Vagina; Colonization partum

#### Poster Presentation

### Tuberculin Skin Test in Primary School Children with 5 Years Follows-up in Kermanshah, Iran (2002-2007)

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**Objective:** Primary school children in Kermanshah in the west of Iran who had neonatal BCG vaccination. This study has described the prevalence of positive tuberculin skin test and new cases of active tuberculosis with 5 years follow up.

**Methods and Subjects:** Tuberculin skin test (TST) was performed on 10184 primary school children in Kermanshah Iran, during Jan 2002 to May 2002, and followed children with positive TST for five years. The samples were selected, by cluster random sampling method, in every school a class was chosen from every grade (Grade 1 to 5) and for all of the students in the classes TST was performed by intra dermal injection of 0.1 ml of 5 tuberculin units (5TU) of purified protein derivative (PPD) from Mycobacterium tuberculosis administered by the Montoux technique. Students with positive TST (15 mm) followed for five years to determine the presence of symptoms of TB disease and chest radiography to exclude TB disease. The tuberculin positive rates at the cut off points of 10 mm and 15

mm for the different sexes and ages were derived and compared using 2 statistics.

**Findings:** Of 10184 school children, 8.15% (830) were tuberculin test positive. Positive skin test in male was 8.7% and in female 7.8% (P=0.121). A significant linear trend was found between the tuberculin positive rates and age at all cut off points (P<0.001). From 529 school children with TST 15 mm 480 cases returned for clinical follow up and no new cases of active disease was detected. For 5 years follow up in 60.41% (290) no new cases of active TB was detected.

**Conclusions:** This study showed the risk of TST positively in primary school children in Kermanshah which was 8.15% with no new cases of active tuberculosis detected with 5 years follow up.

**Key Words:** Tuberculin skin test; BCG vaccine; Iran; Kermanshah

#### Oral Presentation

### Acute Flaccid Paralysis and its Differential Diagnosis in Kurdistan; 9 Years Surveillance (2000-2008)

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**Objective:** Acute Flaccid Paralysis (AFP) surveillance is a key strategy for monitoring the progress of polio eradication and is a sensitive instrument for detecting potential poliomyelitis cases and poliovirus infection. The aim of this study was description characteristics of patients reported with acute flaccid paralysis, and evaluation the performance of the acute flaccid paralysis surveillance system using indicators recommended by the World Health Organization.

**Methods and Subjects:** It is a simple observational study conducted at Sanandaj Center for Diseases Control and Department of Pediatrics. Study was conducted from January 2000 to December 2008. All the AFP cases presenting during this period were included. The data of these cases were analyzed regarding the demographic characteristics and stool culture results.

**Findings:** 128 children younger than 15 years who were reported to the Department of Health between 2000 and 2008 with acute flaccid paralysis were included in the study. None of the cases were acute poliomyelitis or polio-compatible. In 120 (98%) stool samples no virus was isolated. The end diagnoses were as follows: Guillain-Barré syndrome (70 cases), Transverse Myelitis (7 cases), Encephalitis (6 cases), Traumatic Neuritis (2 cases), Viral Myositis (3 cases), Acute Cerebellar Ataxia (3 cases), Myasthenia

Gravis (2 cases), Spinal Tumors (3 cases), Toxic Synovitis of Hip (5 cases), Hypokalemic Periodic Paralysis (one case), others (15 cases). The WHO defined the target of at least two AFP cases per 100000 in children under 15 years per year as a proxy of the sensitivity of AFP surveillance in our country. This target was achieved from 2000 to 2008, from 1.3 to 5.6 per 100 000 population. All except one of the performance indicators consistently met World Health Organization requirements and thus demonstrated the effectiveness of the acute flaccid paralysis surveillance programme in Kurdistan.

**Conclusion:** The effective surveillance system and its evaluation may serve as a model for surveillance of other infectious diseases.

**Key Words:** Acute flaccid paralysis; Surveillance; Poliomyelitis

#### Poster Presentation

### Review of Epidemiologic Indicators of Measles in Isfahan During 2006-2008

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**Objectives:** Despite good coverage of measles vaccination, disease care system and patient tracking in order to enter the program, still ten percent of the total deaths in children less than 5 years in worldwide are due to measles. The purpose of this review of epidemiologic indicators of measles disease in Isfahan is to review geographical distribution, age distribution, sex distribution, and racial distribution, distribution of monthly and review of immune status of disease.

**Methods and Subjects:** This study is a descriptive, analytical and retrospective study gathered by using forms of total health centers of university which prepared from suspected cases of measles and analyzed by SPSS software.

**Finding:** Total of 45 measles cases in 2006, 26 cases (57.77%) has been in city and 19 cases (42.23%) in village. In 2007, of 61 cases about 41 (67.22%) has been in city and 20 cases (32.78%) in the village. In 2008, of the total 31 cases 26 cases out of them (66.67%) in city and 13 cases (33.33 %) has been in village. Age group 1 to 4 years had the most prevalence age. In 1385, it has been 15 cases (33%) and in 2007, 20 cases (33%) and in 1387 it has been 14 cases (36%). The sex distribution of the measles disease has no significant difference; totally 51% were subjects were male. Review of Racial distribution: 95% were Iranian and only 5% were non-Iranian. A Review of monthly distribution of cases of suspected measles cases in 2006 showed that

most cases have been in months of December and January (8 cases per month). In November 2007, 12 cases and March 2008 6 cases found. But totally in three years the greatest number has been in January. Finally, coverage of vaccination was higher than 98% in all provinces of city.

**Conclusion:** The population of city was 3 times more than villages. It needs to give adequate information to physician. The most prevalence age was 1-4 years. In racial distribution of measles disease notice to the foreign nationals (especially Afghanistan, Pakistan, Iraq that has thousands of measles) is too important and should notice fever and rash cases in this racial group.

**KeyWords:** Epidemiologic; Measles; Vaccination; Indicator

#### Poster Presentation

### Acute Hemorrhagic Leukoencephalitis

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**Background:** Acute hemorrhagic leukoencephalitis (AHLE) is a rare demyelinating disease characterized by an acute rapidly progressive fulminant inflammation of the white matter. It is a more severe form of acute disseminated encephalomyelitis (ADEM) characterized by a fulminant clinical course and affecting predominantly children and young adults. It is usually preceded by an infectious illness, such as measles, mumps, rubella, and respiratory infections, including influenza A or B, Mycoplasma pneumoniae, Legionella, Chlamydia or Streptococci. Nevertheless, no virus or other infectious agent has been isolated from the CSF or brain in cases of ADEM.

**Case Presentation:** We are reporting a previously healthy 13-year-old girl, admitted to an American military hospital in city of Harat (north of Afghanistan) because of fever and alteration of consciousness. Night before admission she had fever and chilling. The mother reports that her right side face was swelled at the evening and then at the mid night she got non responsive to the verbally calling. After four days she was referred to our PICU in Mashhad- Iran. On admission, the patient was presented with increased temperature (39.5°C), and drowsy mentality. She had right side parotiditis. Five days later her altered consciousness was developed and initial MR imaging revealed a mainly involving the white matter containing multifocal small hemorrhages without edematous swelling. We found leukocytosis with predominant polymorphonuclear cells in the peripheral blood. Cerebrospinal fluid showed white blood cell count of 3-4 cells/mm<sup>3</sup>, increased protein level (69 mg/dL), and glucose level

was 50 mg/dL (blood glucose of 112 mg/dL). The results of Herpes simplex PCR in CSF, Anti lupus markers and other immunologic and microbiologic studies of the peripheral blood and cerebrospinal fluid were all negative. Second MRI obtained 20 days after initial MRI showed multiple hemorrhagic lesions in the Pons and both thalamuses and the subcortical white matter. A diagnosis of AHLE was made and patient was treated with methylprednisolone, IV IG, acyclovir and plasmaphoresis. The patient was extubated and attained a remarkable healing.

**Key Words:** Acute hemorrhagic leukoencephalitis; Acute disseminated encephalomyelitis; ADEM

#### Poster Presentation

### Study Reported Cases to Undesirable Side Effects Following Immunization in Children Under 6 Years of Old in Coverage of Health Center of Isfahan

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**Objective:** One of the most important medical science improvements was vaccine discovery that saves millions people life. In general, no vaccine is available free from side effects And can has little or seldom strong effects even sometimes threat life. These effects can be because of vaccine itself or due to fault in injection or unfamiliar reasons. Unwanted complications after immunizing care as part of the fusion program immunizing entered or should increase immunizing services that this project is run in our country.

**Methods and Subjects:** This study is a descriptive and cross-sectional study which talks about the past. The selected group was the children under 6 years who injected in health center no 2 of Esfahan and had some effects. Data was analyzed by EPSS, EPI software.

**Findings:** Totally in immunizing program 1387 about 83753 children under 6 years old were under coverage of health center no 2 of Esfahan that after routine injection received 50 cases reported AEFI, 2 out of them were immediate cases ( include pregnant and hospitalizing ) and other were not immediate cases. From 50 records (60%) were boys and (40%) girls. Also 66% under 1 years, 8% between 1-2, 8% between 3-5, 18% were 6 years of old. The most reported effects were respectively urban health centers (50%), hospital (40%), and rural centers (10%). The most important recorded common effects were Respectively 20 cases (40%) Lymphadenitis, 15 cases (30%) parotitis, 5 cases (10%) topical effects, 5 cases (10%) sensitivity of skin, 3 cases (6%) convulsion, 1 case (2%) due to afraid of vaccine and

1 case (2%) fever because of injection. Most effects are relate to BCG then MMR and finally DTP, Number of effects due to Vaccine response were 46 (92%) cases relate to Vaccine response,3 cases (6%) relates to error in program and 1 case (2%) relates to simultaneity.

**Conclusion:** Although these reactions such as additional effects, fever, ...are the part of public signs and immunization response,so because of the different serial manufacturing of the vaccine and different Djvanthay in vaccine and likely incidence of vaccine-related complication or error of technique, it should recommend to doctors and Paramedical to report immunization effects.

**Key Words:** Side effects; Immunization; Children

#### Poster Presentation

### The Role of by Breast Feeding in Prevention of Respiratory Infections in Children of less than 2 years in Kalaleh

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**Objectives:** The best combination to feed the suckling child is breast milk. Regarding to the being combinations in breast milk, expected that the out break of infectious diseases and especially respiratory infections on children who fed by breast milk is less than the other infants. So a study was performed with the goal of analyzing the relationship between breast feeding and appearing the respiratory infection of children less than 2 years in the hospital of The Great Prophet (peace be upon him) in Kalaleh township.

**Methods and Subjects:** This research is a crss sectional study in which considered the file of all suckling's under 2 years. Hospitalized in the hospital of the Great Prophet in Kalaleh township during 6 months (spring and summer 2009). The children suffered from deficiency of the immune system, anatomic disorders in the region of pharynx and mouth and respiratory system and the suffers from the growth inadequacy were not the target group. On a whole, 169 files were considered and in order to analyze the data SPSS 13 was used.

**Finding:** Out of 169 patients, 91.7% were rural and others were unban children. The most hospitalized children were 2 months (27%); and 52.1% were boys. 30.8% of children were born in writer. Totally, 138 patients (81.7%) had pneumonia which is the most prevalent cause of hospitalization. 56.2% of patients had exclusive breast feeding, 23.7% had breast feeding and 19.5% use artificial milk.

**Conclusion:** Accourding to our findings, breast feeding has an positive effect on prevention of respiratory infections.

**Key Words:** Breast feeding; Child; Respiratory infections

#### Oral Presentation

### Osteomyelitis in Infancy and Childhood: A Clinical and Diagnostic Overview

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Osteomyelitis is a relative common disorder in childhood. It is more frequently observed in neonatal intensive care units. The increase of bacterial virulence with reduced susceptibility to antibiotic on one hand and iatrogenic or non-iatrogenic infections on the other hand are diagnostic and therapeutic challenges in daily practice. The patient history and clinical findings as well as blood and tissue culture are absolutely necessary in diagnosing osteomyelitis. The intercurrent infection with soft tissue swelling or tenderness and immobility are the first clinical symptoms depending on location of affected side. The laboratory findings could be specific or non-specific. There are large numbers of micro organisms producing an osteomyelitis but gram positive cocci remain the most frequent.

Generally the source of bone infection in pediatric age group is predominantly hematogenous but adjacent joint or soft tissue infection and direct implantation by trauma, surgery or foreign body can also be the primary cause of an osteomyelitis. From therapeutic and prognostic point of view the osteomyelitis should be classified in pyogenic hematogenous group including neonatal osteomyelitis and the group of chronic osteomyelitis including sclerosing osteomyelitis of Garré. The third group is low grade osteomyelitis (Brodie abscess). A subgroup of osteomyelitis are sequelae of infantile meningococemia or resulting from unusual organisms such as tuberculosis, Aspergillus, Salmonella, parasites and viruses. Diagnostic imaging is absolutely indicated in all type of osteomyelitis. The plain film is the first step to evaluate the location and extension of an osteomyelitis. Ultrasound as a noninvasive procedure can be used in detection of joint and soft tissue complication. The nuclear scanning should be carried out especially in cases suspected for multifocal osteomyelitis. MRI and CT are both valuable modalities in improvement of imaging results and in complicated cases. Finally they can be useful in differentiation of osteomyelitis from other serious skeletal disorders. Occasionally histological evaluation is needed to look for the type of osteomyelitis and inflammatory agent and tissue changes as well as to differentiate osteomyelitis from Ewing sarcoma, osteoid osteoma, Langerhans cell

histiocytosis or others with similar imaging pattern. This presentation is based on a retrospective study of 173 cases of pediatric osteomyelitis including 26 neonatal osteomyelitis and 33 subacute low grade osteomyelitis (Brodie abscess) located in different part of skeleton. The complications and found micro organisms and useful imaging techniques will be presented.

**Key Words:** Osteomyelitis; Bone infection; Brodie abscess

#### Poster Presentation

### Knowledge, Attitude, and Subjective Practice of the Mothers about Prevention of Otitis Media in the Urban Health Clinics of Ghaem-Shahr

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**Objectives:** Otitis media and other sicknesses of middle ear, though, are incomparable with serious diseases of lower respiratory tract such as pneumonia, but acute otitis media always terminate to severe complication of adjacent tissues as well as subdural abscess, purulent meningitis, facial nerve paralysis, serous otitis, conductive hearing loss and etc, that each of this diseases are accounted as a hazardous one. In the small children, one third of upper respiratory viral infection is co-existent with otitis media, so, mothers of these children must be aware about the dangers of this common disease and have a correct response to them.

**Methods and Subjects:** After pre-test and sample sizing, 175 mothers who had under five years children and referred to health clinics of Ghaem-shahr for taking of health services were selected. They suggested to complete a questionnaire which composed of personal demography and 19, 10, and 7 questions about the knowledge, attitude, and subjective practice, respectively.

**Findings:** Mean ages of the mothers were 26/323/5 ± years. 1/7% of mother were illiterate, 15/4% had primary education, and 33/7 % of them didn't finish the high school, and majority of mothers, as 49/1% of them had diploma or academic graduation. The mothers knowledge evaluated about the three preventive levels of otitis media, 83/4% of them had high score at the first preventive level. But at the third level of otitis prevention, the medium score of knowledge was more than high score ( 54/3% versus 27/4%). About the all levels of otitis prevention, 45% of mothers had passive 34/9% had positive and 20% of the rest had negative attitude.

**Conclusion:** In regard to the findings, knowledge and attitude of the mothers about the otitis media prevention levels were at a low scales, but their subjective practice was acceptable

**Key Words:** Acute otitis media; Health Education; Conductive hearing loss

#### Poster Presentation

### Maternal Influenza and Fetus

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**Objectives:** Planning for future influenza pandemic should include considerations specially to pregnant women. First, pregnant women are at increased risk for influenza-associated illness and death. The effects of the fetus of maternal influenza infection, associated fever, and agents used for prophylaxis and treatment should be taken into account.

**Methods and Subjects:** Pregnant women are more at risk for two reasons: their immune system does seem to be suppressed during pregnancy, and their respiratory function is compromised simply because of the pressure on the diaphragm (from the growing

baby). Although certain infections are well recognized to increase the risk for adverse pregnancy outcomes, the effects of maternal influenza infection on the fetus are not well understood. Viremia is believed to occur infrequently in influenza, and placental transmission of the virus also appears to be rare. Fetal effects could be secondary to the maternal inflammatory response, rather than the result of a direct viral effect.

**Findings:** Based on the limited information available, pregnant women who become ill with influenza should be treated aggressively with antifever therapy, and should adhere to standard recommendations for folic acid consumption. Pregnant women might be reluctant to comply with public health recommendations during a pandemic because of concerns regarding effects of vaccines or medications on the fetus. Planning for a future influenza pandemic should include in considerations for pregnant women.

**Conclusion:** Research interests include the identification of risk factors for birth defects, mortality associated with genetic conditions, and the impact of infections of the pregnant woman and her embryo or fetus.

**Key Words:** Maternal influenza; Pregnant women; Fetus