

was found among 20% children. Complications were seen in 24 children, hemiparesis in 11 and seizure disorder in 5.

Conclusion: Brain abscess in conjunction with congenital cardiac malformations have a different sequel and attention should be given towards correct and timely diagnosis as delayed surgical drainage has high morbidity and mortality.

PP-181 Analyses of the seroepidemiology of three kinds of enterovirus of infants from 7 to 30 months

Q.Y. Mao^{1*}, Z.W. Yang², X. Yu², P. He¹, X.Y. Wu¹, Z.L. Liang¹. ¹National Institute for the Control of Pharmaceutical and Biological Products, ²Hualan Biological Engineering Inc, China

Background: Enterovirus 71 (EV71) & coxsackievirus A 16 (CA16) & hepatitis A virus (HAV) were three kinds of common enterovirus in infants and children of China Mainland. In particular, the frequently HFMD caused by the EV71 outbreak result in a few hundreds children's death in China in every recent year. The purpose of this study is to explore the titer and epidemic trends of EV71 & CA16 & HAV in infants and children and provide a basis for HFMD & HAV prevention and control.

Methods: 349 healthy infants and children aged 7–30 months were randomly selected in 2004. Blood was collected and tested for neutralizing antibodies to EV71 & CA16 with microneutralization test and anti-HAV by microparticle enzyme immunoassay (MEIA).

Result: The positive rates of anti-EV71 & anti-CA16 & anti-HAV were 36.7%, 36.6% and 22.9% (128/349, 123/336 and 81/349) in infants and children aged 7–30 months, but the trends were different. Anti-EV71 positive rate showed a significant upward trend; Anti-CA16 positive rate is relatively stable; Anti-HAV positive rate declined in 15–18 months groups, and then rose slowly.

Conclusion: The optimum immunization time is from 1.5-year-old to before kindergarten age for HAV and before 7-month-old for EV71 & CA16 in this area. A combined vaccine for EV71 & CA16 should be considered.

PP-182 Fanconi syndrome associated with Mediterranean visceral leishmaniasis

M. Keighobadi^{1*}, M. Fakhar², R. Akramipour³. ¹Health Research Center, Kermanshah University of Medical Sciences, Kermanshah, Iran, ²Department of Parasitology and Mycology, School of Medicine, Mazandaran University of Medical Sciences, Sari, Iran, ³Department of Pediatrics, Kermanshah University of Medical Sciences, Kermanshah, Iran

We report a case of Mediterranean visceral leishmaniasis (MVL) associated with Fanconi syndrome (FS) from Kermanshah Province, western Iran, where MVL has been reported as sporadic.

The patient, a 2.5 years old boy, was known to be a case of FS and had abdominal pain and prolonged fever and renal failure on referral. Hematological findings revealed severe anemia, and pancytopenia. A trephine biopsy revealed a hypocellular marrow; Myeloid/Erythroide ratio conversions with few amastigotes. Anti-leishmania antibodies were not observed by IFA. The patient was treated successfully with two courses of amphotericin B plus corticosteroid.

To our knowledge this is the first report of MVL/FS from Iran and possibly the world.

PP-183 Epidemiology of neonatal sepsis in Kuwait

M. Hammoud^{1*}, A. Al-taiar¹. ¹Kuwait University, Kuwait

Neonatal infections (sepsis) continue to be one of the major causes of morbidity and mortality in the newborn

period around the world. Neonatal infections currently cause about 1.6 million deaths annually in the developing countries. Closely linked to this is an ongoing problem with antimicrobial resistance, which is increasingly restricting the therapeutic options for medical care providers.

The incidence of neonatal infections in Kuwait is high and the death rate attributed to these infections is also high. To deal with these critical issues, we conducted this study in the neonatal department of Maternity Hospital at Sabah Area, Kuwait. Here we could identify the type of microorganisms (bacteria and fungi), the incidence and the mortality of early-onset and late-onset neonatal infections and the antibiotic-sensitivity patterns. Data was collected from the records of the infants based on sepsis diagnoses, antibiotic treatments, gestational age and weight of the infants, and outcomes of the infected infants.

This study is expected to help us in understanding the local epidemiology of Neonatal Sepsis and in formulating an antibiotic policy suitable to overcome this serious problem.

PP-184 Antibodies to *Toxoplasma gondii* in schizophrenia patients

A. Daryani^{1*}, M. Sharif¹, H. Hosseini¹, A. Karimi¹.

¹Mazandaran University of Medical Sciences, Sari, Iran

Background: Schizophrenia is a severe neuropsychiatric disorder of unknown etiology. As there is few information about the epidemiology of *Toxoplasma gondii* and schizophrenia in Iran, we investigated the seroprevalence of *T. gondii* in these patients and compared with that obtained in control individuals in Sari city, Iran.

Methods: Eighty schizophrenia patients and 99 healthy people were examined for the presence of IgG and IgM antibodies to *T. gondii* by enzyme linked immunosorbent assay (ELISA).

Results: Prevalence rates of anti-*T. gondii* antibodies (IgG/IgM) in case and control groups were 72.5% and 61.6%, respectively ($P > 0.05$). IgG antibodies indicating chronic form of toxoplasmosis were found in 28 (35%) and 25 (25.3%) of case and control people ($P > 0.05$). IgM antibodies (acute form) were also seen in 9 (11.2%) and 11 (11.1%) of case and control individuals ($P > 0.05$). The highest 10th percentile of IgG titers in schizophrenia individuals (18.8%) was significantly higher than control people (6.1%, $P = 0.02$).

Conclusion: As prevalence rate of *T. gondii* antibodies in patients with schizophrenia was high, it seems that designing a cohort study will determine the causative relation between Toxoplasma infection and schizophrenia disease.

PP-185 A seroprevalence study of toxoplasmosis in pregnant women who referred to rural and urban health care centers

K. Cheraghipour¹, M. Rostami Nejad^{2*}, A. Hossein Maghsood¹, E. Nazemalhosseini Mojard², A. Sheykhan³, K. Moradpour⁴. ¹Department of Parasitology, Hamedan University of Medical Science, Hamadan, Iran, ²Research Center of Gastroenterology and Liver Diseases, Shaheed Beheshti University, M.C. Tehran, Iran, ³Department of Immunology, Lorestan University of Medical science, Khorram-Abad, Iran, ⁴Emam Khomeini Hospital, Aleshtar, Iran

Introduction and Objective: Toxoplasmosis is one of the most widespread parasite infections which can cause abnormalities in pregnant women. The aim of this study is to determine the seroprevalence of toxoplasmosis among the pregnant women who referred to rural and urban health centers.

Materials and Methods: Total 331 blood samples were collected from pregnant women who referred to rural and urban health centers Aleshtar city. All samples were evaluated with ELISA IgG and IgM *Toxoplasma gondii* for detecting of total antibody against *Toxoplasma gondii*.

Results: In this study the seroprevalence of toxoplasmosis in urban and rural pregnant women were 36.2% and 44% respectively. Therefore, the seroprevalence of total IgG in urban and rural pregnant women were 25%, 34.6% and the seroprevalence of total IgM in these population were 11.2% and 9.45% respectively. There was a significant relationship between serology results (IgG, IgM) with education, individuals age, contact with meat, cat keeping, type of food, washing vegetables, vegetables consumption and milk in urban and rural pregnant women ($p < 0.05$).

Conclusion: The results of this study show that the high level of education and preferment of general health awareness might be reduce the risk of toxoplasma infection. Therefore, prevention performance and control programs are necessary.

PP-186 Evaluation of protoscolices and germinal layer DNA of the sheep strain (genotype 1) of *Echinococcus granulosus*: Are these having similar production?

M. Rostami Nejad¹, E. Nazemalhosseini Mojarad^{1*}, Z. Nochi¹, M. Fasihi Harandi², M. Reza Zali¹. ¹Research Center of Gastroenterology and Liver Diseases, Shaheed Beheshti University, M.C. Tehran, Iran, ²Parasitology Department of Kerman Medical University, Kerman, Iran

Background: The histology of a typical hydatid cyst demonstrates the germinal layer as the primary site of parasite development which produces the hydatid fluid and small secondary cysts known as brood capsules. Protoscolices are produced within the brood capsules over time. The aim of this survey was to compare DNA products of protoscolices and germinal layer origin from Iranian sheep strain *E. granulosus* isolates.

Material and Method: Forty-five infected organs of cattle, sheep and goat were collected. All these cysts were examined to determine their fertility by microscopic observation of protoscolices. Thirteen of 15 bovine cysts, 5 of 15 ovine cysts and 4 of 15 goats cysts were unfertile respectively. For each fertile cyst, protoscolices were aspirated and for unfertile cyst germinal layer were extracted and washed several times with PBS. DNA of fertile and unfertile cysts was extracted with modified Phenol chloroform method.

Results: There were no significant differences of quality observed between these two types of extracted DNA, in equal of each fertile and unfertile cyst samples after RCR reaction using 12S rRNA gene.

Discussion: In this study we can determine the genotype of *E. granulosus* in both fertile and unfertile cyst using the DNA of protoscolices and germinal layer. In addition, according to our evidence we suggest that the procedure of the extracted DNA of protoscolices is better than germinal layer.

PP-187 Prevalence of Hydatid cyst in Varamin, Tehran

M. Rostami Nejad^{1*}, E. Nazemalhosseini Mojarad¹, S. Mohammad Tabatabaei², H. Ghareh¹, M. Reza Zali¹. ¹Research Center of Gastroenterology and Liver Diseases, Shaheed Beheshti University, M.C. Tehran, Iran, ²Shaheed Mofatah Hospital, Varamin, Tehran

Background: In Hydatid cyst (HC), caused by *Echinococcus granulosus*, the liver is the first and the most frequent

involved organ followed by lung. The present study was conducted to determine the prevalence of HC in surgery ward of Dr. Mofatah Hospital, Varamin, Tehran.

Material and Method: In this descriptive study 2,877 medical records of patients who referred to surgery ward of Dr. Mofatah Hospital were studied. These patients had undergone surgical operations for different reasons. Medical records of patients who had been HC positive were collected and analyzed.

Results: Two HC positive were observed among studied medical records. Both of these patients were female with age 40 and 64 years old. Both were housewives and Liver was the involved organ. There was no relationship between incidence of HC and age of patients. The woman, in case 1, was operated for cysts in the liver, without receiving pharmacological prophylaxis. The woman, in case 2, was admitted with chest pain. She underwent surgical treatment of HC, during the previous year. The patient was treated with Albendazole.

Conclusion: Echinococcosis is still an important health problem in Iran that needs further studies. Therefore, accurate information on the distribution of the disease is first step for the control and prevention. Moreover, it is necessary that in each province the role of different intermediate hosts and the strains of *E. granulosus* in human and animals be investigated.

PP-188 Immunomodulation of hepatic morbidity in murine Schistosomiasis mansoni using fatty acid binding protein

I. Aly^{1*}, E. El-Ahwany¹, W. El-Komy¹, F. Nagy¹. ¹Theodor Bilharz Research Institute, Egypt

Hepatic fibrosis and portal hypertension are responsible for morbidity in schistosomiasis mansoni. The objective of this study was to evaluate the possible anti-morbidity effect of fatty acid binding protein (FABP) of *Schistosoma mansoni* when given to mice before infection.

Multiple small doses of FABP were injected intraperitoneally into experimental animals (100 µg of purified FABP followed 2 weeks later by two booster doses of 50 µg each at weekly intervals) and the experimental design included 3 groups of 15 mice each; the first group received FABP (immunized group), the second group was injected with the 3 doses of FABP one week prior to infection with 100 *S. mansoni* cercariae (immunized-infected group) and the third group served as infected control.

Data revealed reduction in CD4+ cells and increase in CD8+ cells of hepatic granuloma in FABP-immunized infected group, resulting in significant decrease in CD4+/CD8+ ratio, in comparison to infected control group; the serum cytokine levels of both TNF-alpha and IFN-gamma were also significantly decreased. Histopathological examination of liver revealed remarkable increase in percent of degenerated ova within hepatic granuloma which decreased in diameter (12%). In this study, significant reductions in worm burden (46%) and tissue egg loads (42.8% and 50% for hepatic and intestinal ova respectively) were observed in addition to decreased percent of immature stages with increase in percent of dead ova in Oogram pattern.

This work could present a trial contributing to shaping the severity of hepatic morbidity.