

diagnosis of AGE. Stool samples were obtained for rotavirus testing and genotype investigation using ELISA and multiplex RT-PCR.

**Results** The prevalence of rotavirus infection was 27.3% (95% CI 23.6–31). Infants < 2 years of age were most frequently affected (91.6%). The most dominant rotavirus genotype was G3P[8], which accounted for 40.4% of cases. On multivariate analysis, rotavirus was significantly associated with the episode occurring in the winter season (aOR 6.73; 95% CI 3.45–3.31), vomiting (aOR 3.05; 95% CI 1.37–6.75), fever (aOR 1.84; 95% CI 1.10–3.07) and dehydration (aOR 8.20; 95% CI 3.45–19.47).

**Conclusion** The determination of rotavirus infection prevalence and its risk factors will help us to better understand the epidemiology of the disease in our country in order to develop effective preventive measures, including vaccines.

### 935 EVALUATION OF MEASLES OUTBREAK DURING 2010/2011 IN SKOPJE, MACEDONIA

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**Background** Due to low rates of vaccination coverage, in mostly rural in Skopje and as a result of military conflict in 2001, lead to spillover of the measles from neighboring countries, where outbreak of measles was already declared.

**Methods** and materials: Measles reporting is mandatory in Macedonia. Cases analyzed had to meet the national case definition. Case-series investigation were conducted, surveys of rates of vaccination coverage.

**Results** From 07.09.2010 to 22.07.2011, we have registered 596 cases of measles. Of these 596, twenty five case after getting a negative result from laboratory testing were discarded, so the number of cases of measles in the area of Skopje was 572 (Mb = 97.0/100.000). The first case was during a 13 months of age unvaccinated child. Out of 572 cases of measles 235 (41.0%) were hospitalized, mostly with severe clinical symptoms. According to the patients vaccination status the conclusion was that: 517 (90.4%) persons were vaccinated, of which 59 not subject to the vaccination, 19 (3.3%) persons no data, 36 (6.3%) persons were vaccinated, of which a portion of MMR are 30 and 6 with two doses. During the outbreak, laboratory confirmed 84 cases out of 103 taken materials, were positive.

**Conclusions** The high rate of vaccine coverage in most municipalities in Skopje, unvaccinated children with a first dose and absence of the second dose in the first grade in elementary school, mostly in rural areas affected by the military conflict in 2001, were the cause of measles in epidemic form.

### 936 PREVALENCE AND MANIFESTATIONS OF INFECTIOUS MONONUCLEOSIS-LIKE SYNDROME IN A CHILDREN'S HOSPITAL IN GREECE

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**Introduction** Infectious Mononucleosis Syndrome (IMS), is characterized by fever, lymphadenopathy, tonsillitis, hepatomegaly, splenomegaly. Also peripheral lymphocytosis with >10% atypical lymphocytes is present. It is attributed mostly to Epstein-Barr virus (EBV), less to Cytomegalovirus (CMV) and rarely to Herpes Simplex Virus (HSV) and others.

Occasionally, atypical manifestations and serious complications might occur.

**Objective** Estimating the prevalence of the disease, the responsible infectious agents and of the typical and atypical manifestations in pediatric populations.

**Material and Methods** Within 12months, 700 serum samples were examined, from children 1–15 years old. Specimens' laboratory investigation included: 1) indirect immunofluorescence, detecting IgG-IgM antibodies against EBV's Viral Capsid Antigen (VCA), 2) Immuno Chemistry luminescence determination of CMV's IgG-IgM antibodies, 3) EIA, identifying HSV's IgG-IgM antibodies.

**Results** Typical clinical findings were: prolonged fever (89%), lymphadenopathy (82%), tonsillitis (57%), hepato-splenomegaly (40%), cough (20%) and skin eruption (10%). Atypical manifestations were: meningoencephalitis in 2 children, 22months and 7 years old (caused by EBV and HSV1 respectively), haemophagocytic lymphoistiocytosis in an 8 year old (by EBV), Gianotti-Crosti syndrome in an 18 months old (by EBV) and pneumonia in a 22months old (by EBV). In meningoencephalitis, viral DNA was detected using PCR in cerebrospinal fluid while in the remaining cases, positive IgM antibodies were found. Of the 700 children examined, 56 (8%) had positive serology for EBV, 29 (4.14%) for CMV and 1 for HSV 1.

**Conclusions** IMS is often amongst Greek children. 65% of the cases are attributed to EBV and 35% to CMV which is in accordance to the international literature.

### 937 STUDY OF DETECTION VIBRIO CHOLERAЕ O1 FROM KAROON RIVER WATERS AHVAZ AND ROLE IN THE PUBLIC HEALTH

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**Background** The watershed of Dez and Karoon rivers located in middle Zagros mountain with area about 68481-. Thus watershed is a part of Persian gulf watershed. *Cholera*, an acute intestinal infection caused by the bacterium *Vibrio cholerae* (*V. cholerae*) is a historically feared epidemic diarrheal disease that remains a major public health problem in many parts of Africa, Asia, and Latin America. *V. cholerae* O1 exists as two major serotypes, Inaba and Ogawa, a member of the family Vibrionaceae is transmitted through Fresh water contaminated with fecal matter. Foodborne infections have been traced to raw. The target of study the Segregate *V. cholerae* O1 (*Vibrionaceae*) in the Karoon Ahvaz River.

**Methods** In four stages (April, to July 2010), a total 100 samples of water from Karoon River Ahvaz were collected. During the study period the recorded river temperature was about 25–28°C and pH ranged from 7 to 8. Swabs were cultured onto thiosulphate citrate bile sucrose and MacConkey, and morphological colonies compatible with *Vibrio* were characterized by oxidase test and agglutinated with antiserum for serotype determination. Also *V. cholerae* biochemical tests with API 20E.

**Results** From 100 samples of water Karoon River in Ahvaz, Iran, 8 (8%) sample were positive for *Vibrio cholerae* strains. The isolated strains from water Karoon River in Ahvaz, Iran, were *Vibrio cholerae* O1 (inaba).

**Conclusion** The priorities for *cholera* control remain public health interventions through improved water and sanitation, improved surveillance and access to health care facilities, and further development of appropriate vaccines.

### 938 ACUTE HEPATITIS B AMONG CHILDREN IN MONTENEGRO

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