CM03 Prevalence of hepatitis E antibodies in solid organ and hematopoietic stem cell transplant candidates

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KEYWORDS: Hepatitis E virus; seroprevalence; transplant recipients

INTRODUCTION/OBJECTIVES: Hepatitis E virus (HEV) is a single-stranded positive-sense RNA virus that belongs to the *Hepeviridae* family, genus *Orthohepevirus*. Of eight HEV genotypes (1-8) identified, the first four cause diseases in humans. In Croatia, the HEV seroprevalence differs widely depending on the geographical region and population group studied.
MATERIALS AND METHODS: This study aimed to analyze the seroprevalence of HEV in solid organ and hematopoietic stem cell transplant candidates. The study included 178 patients aged 19-75 years, of which 91 were liver transplant candidates(LCT), 47 were kidney transplant candidates (KCT) and 40 were hematopoietic stem cell transplant (HSCT) candidates. HEV IgG antibodies were detected in serum samples using a commercial enzyme immunoassay (ELISA; Euroimmun, Lübeck, Germany).
RESULTS: In the tested group there were 124/69.7% of men and 54/30.3% of women. HEV IgG seroprevalence differed significantly (p=0.009) among population groups. The highest seropositivity was observed in LCT (16/17.5%) compared to 2/4.3% in KTC and 1/2.5% in HSCT candidates. Although males showed a higher seroprevalence (15/12.1%, 95%CI=6.9-19.2) compared to females (4/7.4%, 95%CI=2.1-17.8), this difference was not statistically significant (p=0.351). In addition, there was no difference in the median age of HEV IgG seropositive (61.5 years, IQR=39.5-66.5) and seronegative (median 59 years, IQR=52-65) patients.
CONCLUSION: In conclusion, this study showed a significant number of LCT have HEV antibodies compared to KCT and HSCT candidates. However, due to the small number of participants, further studies are needed to determine the true seroprevalence and risk factors for hepatitis E in this population group.

CM04 Travel-related imported dengue infections in Croatia

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KEYWORDS: Croatia; dengue virus; travel; epidemiology

INTRODUCTION/OBJECTIVES: Dengue virus (DENV) is an emerging flavivirus that causes dengue fever, a mosquito-borne viral disease that is common in tropical and subtropical regions of the world. There are four DENV serotypes (DENV1-4). The virus is transmitted to humans through the bite of infected *Aedes* mosquitoes (*Ae. aegypti* and *Ae. albopictus*). Symptoms of dengue include fever, headache, joint and muscle pain, and rash. The aim of this study was to analyze the prevalence of dengue fever in febrile travelers returning from endemic areas.
MATERIALS AND METHODS: DENV IgM and IgG antibodies were detected using a commercial ELISA (Euroimmun, Lübeck, Germany), while DENV RNA was detected using an RT-PCR. One DENV strain was Sanger sequenced.
RESULTS: A total of 56 patients (31/55.4% males) tested from 2016 to 2022 were included. In addition to fever, reported in all patients (56/100%), the clinical symptoms were: headache (10/17.9%), myalgia (19/33.9%), arthralgia (22/39.3%), and rash (15/26.8%). Areas of potential exposure were Central or South America (23/41.1%), Asia (22/39.3%), and Africa (11/19.6%). Acute dengue fever was detected in 12 (21.4%) patients. In 11 patients, DENV infection was confirmed serologically, while DENV RNA was detected in a blood sample in one patient. Phylogenetic analysis of the detected strain confirmed the presence of DENV1. In addition, 6 patients (10.7%) showed previous exposure to DENV (IgG antibodies). Areas of importation/number of patients were: Maldives/1, Somalia/1, Tanzania/1, Sri Lanka/1, South Africa/1, Central America/2, India/2, Indonesia/2, Philippines/2, Cuba/2, and Thailand/3.
CONCLUSION: Since *Ae. albopictus* is present in Croatia, vector control measures, dengue surveillance, and health education should be performed continuously.