

3rd International Congress on

Bacteriology and Infectious Diseases

August 04-06, 2015 Valencia, Spain

Difficulties in clinical and laboratory diagnosis of infectious mononucleosis

N C Sargsyants, H B Magdesieva and N S Stepanyan
Armenicum Clinical Center, Armenia

Introduction: Epstein-Barr virus (EBV) or human herpesvirus 4 causative agent of infectious mononucleosis (IM) is ubiquitous. But diagnosis of IM because of clinical diversities and laboratory diagnosis difficulties till date is not on proper level.

Materials & Method: We study epidemiological, clinical and laboratory peculiarities of IM in 10 patients (60% male). Patients age was from 19 to 29 years old (average 22.7 ± 3.1), 50% were students.

Results: Acute IM cases in 60% observed in winter-spring season (from February to May), in 40% during summer. In majority of patients diagnosis was done after 7 days from the onset of disease (average 11.0 ± 4.6), in 90% only after infectious disease specialist consultation. No cases among family members (house-hold contact). The onset of disease was with febrile temperature in 80% of patients. Maculo-papular rash we noticed only in one case and are associated with amoxicillin intake. Periorbital edema mentioned in 90% of patients, nasal breath difficulties-in 80%, hypernasal voice-in 40%. Neck edema around enlarged lymphatic nodes took place only in one patient. Catarrhal nasopharyngitis we observed in 40% of cases while follicular and lacunar tonsillitis in 60% of patients with acute IM. Best effect on fever and tonsillitis resolution among antibacterial drugs was associated with azitromycine. Generalized lymphadenopathy revealed in all patients with maximal enlargement of angular-mandibular lymphatic nodes. Hepatosplenomegaly was mandatory. Laboratory parameters ($m \pm SD$): Lymphocytes 5.16 ± 1.5 ; Lymphocytes-% 51.8 ± 5.7 ; Monocytes-% 14.3 ± 3.1 ; Leucocytes 10.9 ± 2.1 ; ESR 15.5 ± 8.75 ; ALT 240.7 ± 106.4 ; AST 123.9 ± 52.2 ; GGT 154.2 ± 95.3 ; ALP 346.4 ± 114.9 . Valacyclovir was prescribed in 6 patients; dexametasone due to severe upper respiratory tract edema in 2 patients (4 mg for 3-5 days). The heterophile antibodies agglutination test with horse RBCs was positive in 8 patients, in 2 patients diagnosis was conformed only after positive result of VCA IgM, EA-D IgM and VCA IgG detection.

Conclusions: Besides characteristic clinical signs and diagnostically useful parameters (lymphomonocytosis, atypical lymphocytes, abnormal liver function test, etc.) serological tests for antibodies specific for EBV antigens (viral capsid antigen (VCA) IgG, VCA IgM and EBV nuclear antigen (EBNA)-1 IgG) are used to define infection status and for the differential diagnosis of acute IM.

sknarina70@yahoo.com

First study in Qatar revealed high Legionella count in cooling towers

Houda Y Moussa, Samah A Hussien, Tameem A Hadwan and Hassan A Aziz and Gheyath K Nasrallah
Qatar University, Qatar

Transmission of *Legionella* from water into human is mediated by aerosols-generating devices including cooling towers (CTs) and air conditioners. Despite the abundance of central cooling systems in Qatar, there is no published report examined the presence of *Legionella* in these systems, thus, this study was conducted. Ten CTs (7 old and 3 new technology units) located in Qatar University campus were monthly sampled. A total of 90 water samples were collected from these CTs and bacterial was recovered by filtration and concentration. DNA was extracted from the concentrates and *Legionella* DNA copy number (CN) was assessed by quantitative RT-PCR. According to Yanez et al. 2005, *Legionella* DNA CN was translated into CFU/mL by dividing CN/20. *Legionella* species DNA was detected in 100% of the samples. The lowest and the highest count was 0.006 and 199.56 CFU/mL respectively. The critical count of more than 10 CFU/mL that represents a potential hazard (according to CDC) was found in 55.3% of the samples. High counts were mainly seen in May and June. Our results suggest that *Legionella* could be a potential health risk to the population of Qatar and calls for an urgent need to set up a stringent monitoring program.

gheyath.nasrallah@qu.edu.qa