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Zoonotic endocarditis in Egypt

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Infective endocarditis (IE) is a life-threatening disease. Zoonotic bacteria can cause blood culture–negative endocarditis (BCNE). Zoonotic IE is prevalent in North Africa. The study aimed to diagnose IE caused by the zoonotic pathogens Brucella spp., Bartonella spp. and Coxiella burnetii in BCNE by PCR and serology. The study prospectively followed up all patients with suspected IE referred to the Endocarditis Service, Cardiology Department, Cairo University from February 2005 to February 2013. Three sets of blood culture were withdrawn on admission. Resected surgical material was cultured whenever available. Serologic testing was performed for detection of Brucella antibodies using standard agglutination test, IgG titers for Bartonella, and IgG, IgM, and IgA antibody titers for Coxiella burnetii using IFA on the sera of all referred patients. A patient was considered to have endocarditis caused by Brucella when antibody titers exceeded 1/320, Bartonella when IgG titers >1:800, and Coxiella when IgG phase I titer >1:800. Broad range bacterial 16S rRNA from blood culture bottles and surgical materials followed by sequencing for identification of positive cases was done. IE was classified as definite in 300 patients; 50% of them had BCNE. Zoonotic endocarditis was diagnosed as by serology and PCR in 15 (5%) patients including 6cases of Brucella spp., 5 cases of Bartonella spp. and 4cases of Coxiella burnetii. Zoonotic agents were a cause of 9.3% of BCNE. Zoonotic agents are important cause of IE in Egypt.

Biography

Mervat G Al-Enany is a Professor of Clinical Microbiology, Cairo University Medical School. Microbiology & Infection control Consultant. She has completed medical study at the age of 23 years and postdoctoral studies from at the age of 31 years. She is the director of infective endocarditis laboratory committee. She is the head of infection control team of medical hospital. The research activities included different clinical microbiology subjects including molecular typing of resistant organisms, diagnosis of brucellosis and diagnosis of infective endocarditis. She has published more than 20 papers in national and international journals.

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