

4th International Conference on

Clinical Microbiology and Microbial Genomics

October 05-07, 2015 Philadelphia, USA

Zoonotic endocarditis: Ten years study (2005-2015)

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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 2015. Three sets of blood culture were withdrawn on admission.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 or possible in 400 patients; 50% of them had BCNE. Zoonotic endocarditis was diagnosed in 28(7%) patients including 16 cases of *Brucella spp.*, 8 cases of *Bartonella spp.* and 4 cases of *Coxiella burnetii*. Zoonotic agents were a cause of 11% of BCNE. Zoonotic agents are important cause of IE in Egypt.

Biography

Mervat G A El-Enany is a Professor of Clinical Microbiology at Cairo University Medical School. She is also a Microbiology & Infection control Consultant. She is the Director of Infective Endocarditis Laboratory committee and 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. He has published more than 30 papers in national and international journals.

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