

Evolving trends in infective endocarditis over three decades in a developing country

A. Maaroufi, H. Zahidi, M. Abdulhakeem, S. Arous, E.G. Benouna, A. Drighil, L. Azzouzi, R. Habbal

Ibn Rochd University Hospital, Cardiology, Casablanca, Morocco

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Introduction: Infective endocarditis (IE) is a rare serious disease for which diagnosis and treatment and prophylaxis continue to develop.

Purpose: The aim of our work were to analyze evolution in its epidemiologic, clinical, and microbiologic characteristics, as well as the outcomes.

Methods: This study compare data from a retrospective study conducted by Bennis and Al based on 157 cases of infectious endocarditis admitted in tertiary care Hospital between January 1983 and December 1994, these cases are referred as Group A; and 103 cases of infective endocarditis according to Duke criteria admitted to the same center three decades afterwards from december 2013 to January 2020, which are referred as Group B.

Results: The mean age of the patients has became older over decades, with a mean of 27.5 years (11–65 years) in the group A versus 39.2 years [13–84] in the group B, with preservation of the male predominance (62.8% in group A vs 62.1% in group B).

Infectious endocarditis secondary to rheumatic valvular heart disease has significantly decreased from 63.% of patients in group A to 27.5% in group B.

Mitral or mitro-aortic valve involvement stayed predominant in both groups with a increase of mechanical prosthetic valve involvement with 9.7% in group B.

A portal of entry of the infection was identified in 63% of patients in group A versus 41% in group B, we noted a significant decrease of dental-related cases from 64% in group A to 29% in group B, and a predominance of invasive procedure/devices cases in group B with 36% of identified cases. In group A Blood cultures were positive in 42% of cases with a predominance of Staphylococci (30%) and coagulase-negative Staphylococci (25.7% of cases) whilst in group B blood cultures were positive in 30% of cases with a predominance of Staphylococci (36.6%) and Streptococci (20% of cases).

Echocardiography as a useful diagnostic tool demonstrated specific lesions of infectious endocarditis (abscess or vegetations) in 73.2% of cases in group A and 82% in group B. The clinical course in group A was complicated by congetive heart failure CHF (47.8%) or neurological lesions (11.5%) while in group B CHF was noted in 35% of cases and 8% of neurological lesions and The global mortality went from 28.7% in group A to 15% in group B related mostly to cardiogenic shock.

Conclusion: Our work demonstrated changes in the epidemiologic characteristics of IE that parallel changes in demographic and risk factors. The progress of diagnosis and treatment options in developing countries explains the better prognosis for this condition today.