

BLOOD CULTURE-NEGATIVE INFECTIVE ENDOCARDITIS AT A TERTIARY CARE HOSPITAL IN SOUTHERN PAKISTAN

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AIMS AND OBJECTIVES:

- To study blood culture-negative endocarditis cases seen at a tertiary care hospital in a developing country
- To compare the clinical features and outcomes of blood culture-negative endocarditis (CNE) with culture-positive (CPE) cases

METHODS: Data on 159 episodes of infective endocarditis seen at the Aga Khan University Hospital from 1988-2001 were retrospectively reviewed. All cases underwent verification of diagnosis according to the modified Duke criteria.

RESULTS: Eight-six (54%; 35 with 'definite' and 51 with 'possible' endocarditis) patients had CNE and 73 (46%) had CPE. The median age at presentation was 31.5 years. Median duration of symptoms before presentation was 20 days. Fifty-three (62%) of them were males and 33 (38%) were females. Fever, splenomegaly and heart murmur was present in 92%, 16% and 86%, respectively. Mitral (45%) and aortic valve (28%) involvement was most common. Vegetation on echocardiogram was present in 63 (73%) and valve abscess in 4 (4.7%) cases. Major morbidity included neurological (26%) and renal (9%) complications and heart failure (21%), and all (including peripheral embolism) were associated with significantly higher mortality ($p < 0.05$). Mortality was higher with 'definite' endocarditis compared with 'possible' CNE endocarditis ($p = 0.04$). The overall patient mortality was 26.5% vs. 20.5% for CPE.

CONCLUSION: In Pakistan, CNE accounts for a higher percentage of endocarditis cases than in the West, and the frequent use of over-the-counter antibiotics is likely a major contributor. The presence of heart failure, neurological and renal complications predicts worse prognosis. The mortality associated with culture-negative endocarditis is somewhat higher as compared to culture positive cases, although not statistically significant.

Keyword: Blood Culture negative, Endocarditis, mortality