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Acute Rheumatic Fever – Review of the Previous 40 Years and a Critical Appraisal of the Jones Criteria: A Single-Center Experience

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Background. Acute Rheumatic Fever (ARF) develops following group-A β -hemolytic streptococcus infections, and may result with severe complications including rheumatic heart disease (RHD). The aim of this study is to evaluate the general demographic and clinical features of patients that followed-up with a diagnosis of ARF during the last four decades at our department, and establishing an epidemiological database for further studies.

Methods. Patients that diagnosed and followed-up with a diagnosis of ARF at Ondokuz Mayıs University Faculty of Medicine, Department of Pediatric Cardiology, between 1978-2016 were retrospectively evaluated. Assessments were separated into 4 time periods as 1978-1988, 1990-2001, 2001-2011 and 2011-2016 to reflect the temporal trends. Diagnostic criteria have been updated according to the revisions by American Heart Association in 1992 and 2015 and by World Health Organization in 2003.

Results. A total of 885 ARF cases were evaluated in the study. The incidence of ARF was found to be in a decreasing trend and most recent incidence rate was 0.164%, and RHD incidence was 0.15%. There was a tendency towards female gender, and age distribution between genders was similar. Recent data suggests that isolated major findings according to Jones criteria were distributed as 58.3% for carditis, and 8.4% for arthritis. Most frequent combined major findings were carditis+arthritis (18.7%), carditis+chorea (12.5%), and carditis+erythema marginatum (2.1%). The frequency of isolated chorea, erythema marginatum and subcutaneous nodules were decreased over time, and subcutaneous nodules have not been observed recently. Recent treatments resulted with cure in 55.7% of cases, and 3.4% of cases had additional valve lesions.

Conclusion. According to our findings, major complications and mortality have been controlled substantially over time, but incidence rates are still high due to shortcomings in secondary prophylaxis. Particularly subcutaneous nodules are decreased to undetectable rates, and may be excluded from the major criteria of ARF in the next revision.

Keywords: Acute rheumatic fever, rheumatic heart disease, carditis, Jones criteria, subcutaneous nodules, Turkey, epidemiology