

Evaluation of Revised Jones Criteria for Diagnosing Acute Rheumatic Fever in the Setting of a Tertiary Cardiac Centre in India

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Introduction and Objective: There is no gold standard or diagnostic test for diagnosis of acute rheumatic fever (ARF). The diagnosis is guided by Jones criteria which were last updated in 2015. The revised criteria are population specific, being different for moderate and high risk populations. We evaluated the diagnostic yield of these criteria for diagnosing ARF in a tertiary referral centre with facilities for cardiac valve surgery.

Methods: Data of patients with ARF (diagnosed by physician judgment and not strictly by criteria) recruited in a prospective, hospital based, pediatric rheumatic heart disease (RHD) registry was analyzed to see the fulfillment of Jones criteria. There were a total of 124 children with ARF seen over a 4 year period. All underwent echocardiography.

Results: The age ranged from 5 to 15 years (mean 10.4 ± 2.2 years) and 60% were males. 31% presented in NYHA class III or IV, only 15% were in NYHA class I. Of the total 124 cases, 62% were already diagnosed with RHD and had recurrence of ARF. Only 18% fulfilled revised Jones criteria. The commonest reason for diagnosing ARF in these children was worsening of functional class, congestive heart failure and increase in valvular lesion severity (48%). ASO titer was elevated (>333 IU) in 34% and CRP (> 3 mg/dl) in 70%. ESR of > 30 mm/h was present in 37%. One patient presented with syncope secondary to complete atrio-ventricular block requiring temporary pacemaker, which resolved in 3 days. Echocardiography revealed significant (moderate or severe) mitral regurgitation in 97% and aortic regurgitation in 23%. Nodules were seen on mitral valve in 43% and on aortic valve, in 8%. 19% had mild pericardial effusion and flail mitral valve was seen in 5% of patients. One patient died during ARF due to progressive heart failure and one underwent valve replacement surgery during acute phase.

Conclusion: In the setting of a tertiary cardiac referral centre, most patients with ARF present in an advanced stage of the disease and may not fulfill the conventional Jones criteria. The diagnosis should be considered in those demonstrating recent worsening of their symptoms and valvular regurgitation.