Examining the World Heart Federation criteria for echocardiographic diagnosis of rheumatic heart disease in patients with isolated rheumatic arthritis or chorea

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Background: According to World Health Organization estimates, a minimum of 15.6 million cases with rheumatic heart disease exist with 233,000 deaths attributable to it annually; this makes it of utmost importance to early apply secondary prophylaxis in mild asymptomatic patients in order to adequately hinder the progression of a still lethal disease.

Methods: Over a period of one year, children presenting to Cairo University Hospitals with isolated acute rheumatic arthritis or chorea (all with no clinical evidence of carditis) had echocardiographic screening, then they had been categorized according to the World Heart Federation criteria for echocardiographic diagnosis of rheumatic heart disease.

Results: 54 patients with acute rheumatic fever were included (mean age 8.92±1.7). 48 patients (88.8%) had arthritis; 14 of them (29.1%) fulfilled criteria for definite rheumatic heart disease (8 patients in the subcategory of pathological mitral regurgitation and at least two morphological features of rheumatic affection of the mitral valve, and 7 patients with borderline disease of both aortic and mitral valves), 11 of them (22.9%) fulfilled criteria for borderline rheumatic heart disease (7 with pathologic mitral regurgitation, and 4 with pathologic aortic regurgitation). 6 patients (11.1%) had chorea; 4 of them (66.6%) fulfilled criteria for definite rheumatic heart disease (2 patients in the subcategory of pathological mitral regurgitation and at least two morphological features of rheumatic affection of the mitral valve, and 2 patients with borderline disease of both aortic and mitral valves), 1 of them (16.6%) fulfilled criteria for borderline rheumatic heart disease (pathologic aortic regurgitation).

Conclusion: The category of patients which is classified according to the recent World Heart Federation criteria as borderline rheumatic heart disease is frequently encountered during the primary attack of rheumatic fever especially in cases with isolated aortic valve affection; and while the current guidelines made no solid recommendation for secondary prophylaxis in this category of patients; it seems prudent to recommend it for children in high-prevalence area.