

*Letter to the Editor*

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## The role of echocardiography in diagnosing carditis in the setting of acute rheumatic fever

Keywords: Jones' criteria; Sydenham chorea; children

Dear Sir,

Vijayalakshmi et al,<sup>1</sup> reinforced by the accompanying editorial comment,<sup>2</sup> state that echocardiographic findings, being more accurate than clinical evaluation in the detection of mild valvitis and carditis, should be accepted as a major criterion for the diagnosis of carditis in rheumatic fever. We agree with the authors. In our hospital, we routinely perform echocardiography in all patients suspected of having had rheumatic fever so as to rule out presence of carditis. In all cases, we consider the presence of mild or moderate mitral, or combined mitral and aortic, regurgitation detectable with echocardiography, even if clinically silent, to represent a major criterion in the Jones' system.

Vijayalakshmi and colleagues<sup>1</sup> have constructed a meticulous system of scoring with which to diagnose carditis or valvitis, basing their approach more on accurate cross-sectional evaluation of the valves than use of colour Doppler to measure the regurgitant jet. In our opinion, however, such a system of scoring is difficult to apply in clinical routine, being highly dependent on the technical equipment used and the experience of the operator. Other recommendations in contrast,<sup>2–4</sup> widely accepted, focus on the use of colour Doppler interrogation to evaluate and potentially quantify pathological valvar regurgitation. In the last year, in Trieste, we encountered an outbreak of rheumatic fever, with our previous incidence of 4 to 6 new cases seen for 100,000 children each year increasing in 2008 to 50 instances per 100,000 of the childhood population. In all, we treated 12 patients with rheumatic fever, studying all the children echocardiographically, and finding that 7 of the 12 (58%) had cardiac involvement. Of the 7 with

cardiac involvement, subclinical carditis was detected in 4 only by the use of echocardiography. Chorea was present in 5 patients, and was always combined with mild mitral and aortic regurgitation, clinically detectable in only 1 patient. It is known that patients presenting with chorea are more prone to have carditis. Thus, echocardiography should be performed in such patients as soon as possible at the onset of the suspected disease, and should then be included in a regular programme of cardiologic follow-up.<sup>5</sup> Sydenham's chorea is also a major criterion in the Jones' system. Its presence permits an easy diagnosis of rheumatic fever. This is not the case, however, for those patients suspected of suffering from rheumatic fever in the absence of a major criterion. In this circumstance, echocardiography may be helpful in detecting signs of carditis, otherwise clinically silent, and making possible the correct diagnosis, coupled with appropriate secondary prophylaxis. We agree, therefore, with Vijayalakshmi and colleagues<sup>1</sup> concerning the importance of performing echocardiography routinely in all patients suspected of having rheumatic fever, and with their suggestion to include echocardiographic assessment as a major criterion of rheumatic fever. It remains the case, nonetheless, that clear definitions of the echocardiographic findings related to rheumatic fever need to be established for use in children.

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Accepted for publication 4 May 2009

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