Reviewer’s report

Title: Clinical significance of intraventricular gradient during effort in an adolescent karate player.

Version: 2 Date: 29 October 2007

Reviewer: emilio pasanisi

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The authors well described a case of 16 year-old boy well trained, symptomatic for occasional chest discomfort during strenuous exercise. There was no relevant personal history and no family history of sudden death or heart disease were reported.

Physical examination, 12 lead ECG, echocardiography were normal. In order to look for symptoms he underwent treadmill exercise test was that was considered positive for myocardial ischemia. In this case stress echocardiography showed that the patient’s ischemic symptoms resulted from LVOT obstruction caused by SAM of the mitral valve, which most likely compromised subendocardial blood flow. Thus, what can be a false-positive treadmill test is a pseudo-false-positive result.

To date the clinical importance of these findings is not clear in healthy subjects, the authors should emphasize the role in a diagnostic algorithm of exercise echocardiography, rather than nuclear imaging tests. Exercise echo has higher accuracy for a dynamic evaluation of the heart during exercise by wall motion and Doppler analysis.

The authors should underline why is important exercise echo in consideration of the age of these patients. The authors should propose a diagnostic algorithm including strategies that should be developed to minimize or eliminate the amount of unnecessary radiation exposure.

In these cases the prognostic role of dynamic obstruction without any structural abnormalities is not clear, but seems to be safe to stop the sport for these young adults.

What next?: Accept after minor essential revisions

Level of interest: An article of importance in its field

Quality of written English: Needs some language corrections before being published