Reviewer’s report

Title: Additional value of lateral tissue Doppler imaging in the assessment of diastolic dysfunction among subjects with pseudonormal pattern of mitral inflow and septal tissue Doppler imaging

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Reviewer: Maurizio Galderisi

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Interesting study dealing with the value of pulsed Tissue Doppler sampling of the mitral annuls (lateral or septal) in grading LV diastolic dysfunction. The authors find that lateral E’/A’ # 1 is a valuable indicator of early diastolic dysfunction but noy of advanced diastolic dysfunction

The study is well designed and developed. The concept of “early diastolic dysfunction” is intriguing and could create new tracks in the clinical setting.

Concerns

Major

1. It is not clear how the patients were classified to have a pseudonormal pattern

The authors shall better describe it in the “Methods” section.

2. When analyzing the ROC curves, sensitivity and specificity for detecting left atrial dilation, the cut-off value should be moved from 28 to 34 ml/mm2 according to guidelines (Nagueh SF et al).

3. Whenever possible, a multivariable analysis should be performed continuous variables such as blood pressure and fasting glycemia.

4. A recent study highlighted the superiority of E/lateral e’ than E/average e’ in detecting LV filling pressure increase in patients with coronary artery disease (Eur Heart J Cardiovasc Imaging 2013 June). This study should quoted and described in the discussion.

5. The discussion is too long and should be shortened.

Minor

1. According to ASE/EAE rec (Nagueh S et al) the term “e’ ” shall be preferred to “E’”.

2. English language of the manuscripts shall be improved.

Level of interest: An article of importance in its field

Quality of written English: Needs some language corrections before being published
Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests: No conflict of interest