Reviewer's report

Title: Evaluation of cardiac masses by real-time perfusion imaging echocardiography

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Reviewer: Piotr Lipiec

Reviewer's report:

Very interesting and well-conducted study concerning the diagnostic value of real-time perfusion echocardiography (RTPE) for cardiac masses characterization. The results presented by authors confirm the potential of RTPE in this clinical scenario.

Minor essential revisions

1. Authors indicate that “The diagnosis of cardiac thrombi was performed based on history and clinical presentation, including atrial flutter, atrial fibrillation, atrial dilatation, valvar stenoses and areas of left ventricular akinesia or diskinesia, associated with serial echocardiography findings of thrombus resolution after anticoagulation”. To summarize, standard echocardiography combined with clinical history was a reference technique for diagnosing thrombi. Therefore, a question arises whether the use of RTPE in these patients added any clinically relevant information compared to standard echocardiography. Moreover, presumably some of the tumors could have been diagnosed with very high degree of probability based solely on their features in standard echocardiography. With all these issues in mind, I believe that including a paragraph on added clinical value of RTPE (using criteria and cut-off values proposed by authors) compared to standard echocardiography in this group of patients would increase practical impact of study results.

2. Additional intracardiac masses can sometimes be relatively small and highly mobile (e.g. fibroelastoma) making it difficult to assess perfusion quantitatively. Did authors encounter such problems or were patients with such tumors excluded from the study group?

3. Minor imperfections of grammar should be corrected (e.g. “did not received” on page 11)

Level of interest: An article of outstanding merit and interest in its field

Quality of written English: Acceptable

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:
I declare that I have no competing interests.