Reviewer's report

Title: Tissue Doppler and Strain imaging: anything left in the Echo-Lab?

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Reviewer: Rosa Sicari

Reviewer's report:

This is a timing and well written manuscript but authors conclusions are not convincing. The so called “new technologies” never passed through the fundamental steps to move them from the status of promising technology to that of established ones. Authors do outline the limitations of these technologies, do appear sceptical on their possible routine use in clinical practice and then imagine an echo lab in which the time spent in off-line analyses will be become the real work of the clinical cardiologist-echocardiographist!

We would like to know the clinical scenarios in which authors think that new technologies will have an additive value. In fact, the time-consuming analyses will be worthwhile only if the additional value over more conventional parameters is recognised and demonstrated. So answer the question of the manuscript title: is there room for these technologies in the routine echo lab?

Not all parameters are created equal and E/E’ is accepted, with the limitations nicely described by authors, in routine clinical practice. Very different is the scientific life of TDI applied to stress echocardiography. Please comment.

Their criticism to the PROSPECT trial is not convincing either. It is not the study design that was poor but the technologies used have important limitations that became evident when they were applied on consecutive patients in a real world analysis. In the study the best technologies used by the best clinical hands in the field had a very poor outcome. Please comment.

There are important technical problems in the softwares developed by different manufacturers: the name of the parameter may be the same but the normalcy values are quite different. Probably, on of the first steps to take, and then go back to experimental laboratories is to uniform probably on phantoms the several parameters that have been developed and proposed.

Still the search for a quantitative approach to echocardiography is ongoing. Maybe authors can tell us what we can expect in the next future.

Level of interest: An article of importance in its field

Quality of written English: Acceptable

Statistical review: Yes, and I have assessed the statistics in my report.
Declaration of competing interests:

'I declare that I have no competing interests'