Reviewer's report

Title: Percutaneous Treatment of Patients with Heart Diseases: Selection, Guidance and Follow-Up: a review

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Reviewer: Holger Eggebrecht

Reviewer's report:

The manuscript by Carla Contaldi and coworkers is well-written review of current catheter techniques using for less invasive treatment of various structural heart diseases. The paper gives a very nice overview of current selection criteria, intraprocedural guidance and follow-up examinations of PFO/ASD closure, closure of paravalvular leakage, MitraClip implantation, LAA occluder implantation, and finally TAVI.

In my opinion, the manuscript is actually overloaded with information. Different interventions are described ranging from very rare indications (paravalvular leakage) up to more frequent conditions such as mitral regurgitation or aortic stenosis. I would suggest to separate the paper into 2 parts: 1st interventions in valvular disease (TAVI, MitraClip), 2nd Closure of PFO, LAA, PVL etc. In such manner, the description of echocardiographic techniques can be provided much more detailed and precise without overloading the Reader with information.

Specific comments: I don't agree with the authors on the role of TEE in PFO. I think it is the most valuable technique. Screening may be performed with TCD or contrast TTE, but if suspected or before closure, a TEE has to be performed and is the method of choice. During the procedure, echocardiography is not required. The paragraph on migraine patients should be deleted. I believe there is no justified indication for PFO closure in these patients. After PFO closure a residual shunting can be present, which will disappear after follow-up of usually 6 months.

The description of PVL closure is very detailed while the paragraph on TEE during MitraClip is somewhat short. It would make much more sense to divide the paper into 2 parts as stated above, to be adequate in the description of TEE during MitraClip.

Level of interest: An article whose findings are important to those with closely related research interests

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