**Reviewer’s report**

**Title:** Left atrial thrombus due to transseptal catheterization simulating solid mass of right atrium

**Version:** 0 **Date:** 02 Feb 2017

**Reviewer:** Chad Zack

**Reviewer's report:**

The authors detail the case of a 72-year-old woman with a past medical history of mitral stenosis treated with percutaneous mitral balloon valvotomy (PMBV) 7 years prior who presented with symptoms of a right sided embolic stroke. The initial work-up revealed a right atrial mass concerning for a benign intracardiac tumor. A decision was made to proceed with open surgical resection of the cardiac tumor and adjacent atrial septum. Intraoperatively, the right atrial mass was discovered to be a cystic mural thrombus which communicated with the left atrium. The authors hypothesize that the thrombus is a late complication related to an iatrogenic atrial septal defect from her prior PMBV. They conclude by stating prior transseptal interventions should be considered in patients subsequently found to have a mass on the atrial septum and that care should be undertaken during surgical resection to prevent embolization.

I found this to be an interesting case, but there are several portions of the presentation which need further clarification.

There is very little information provided on the patient's past medical history other than she had mitral stenosis (MS) treated with PMBV. I presume the MS is from rheumatic disease this would be worth mentioning. In addition, were other comorbidities present that may have affected her predisposition to left atrial thrombus formation such as a hypercoagulable state, residual MS, or atrial fibrillation? Was the patient on anticoagulation? Are there TTE;TEE images available including those prior to this admission which show the presence of a residual shunt from her PMBV or an ASD prior to PMBV (as atrial septal aneurysm (ASA) is closely associated with septal defects)? Are there any images of the left atrium (LA) and was there any additional thrombus present in the LA or appendage? Also, why was the length of stay 12 days and is there follow up available on the patient since the procedure?

Overall, this is a unique case of a patient that had a cardioembolic stroke that the authors believe is a late complication of a transseptal puncture for PMBV. While it is certainly plausible that the patient's presentation is related to a residual interatrial shunt from PMBV. It also possible that the patient was born with an ASA with an atrial septal defect, seen in up to 70% patients with ASA. The defect may have been crossed for the PMBV without transseptal puncture. Therefore, prior imaging will be important. Also, is there evidence of prior RV dilatation or dysfunction would be helpful.
Lastly, there is a typographical error on page 6 line 12.

**Level of interest**
Please indicate how interesting you found the manuscript:

An article whose findings are important to those with closely related research interests

**Quality of written English**
Please indicate the quality of language in the manuscript:

Acceptable

**Declaration of competing interests**
Please complete a declaration of competing interests, considering the following questions:

1. Have you in the past five years received reimbursements, fees, funding, or salary from an organisation that may in any way gain or lose financially from the publication of this manuscript, either now or in the future?

2. Do you hold any stocks or shares in an organisation that may in any way gain or lose financially from the publication of this manuscript, either now or in the future?

3. Do you hold or are you currently applying for any patents relating to the content of the manuscript?

4. Have you received reimbursements, fees, funding, or salary from an organization that holds or has applied for patents relating to the content of the manuscript?

5. Do you have any other financial competing interests?

6. Do you have any non-financial competing interests in relation to this paper?

If you can answer no to all of the above, write 'I declare that I have no competing interests' below. If your reply is yes to any, please give details below.

None

I agree to the open peer review policy of the journal. I understand that my name will be included on my report to the authors and, if the manuscript is accepted for publication, my named report including any attachments I upload will be posted on the website along with the authors' responses. I agree for my report to be made available under an Open Access Creative Commons CC-BY license (http://creativecommons.org/licenses/by/4.0/). I understand that any comments which I do not wish to be included in my named report can be included as confidential comments to the editors, which will not be published.

I agree to the open peer review policy of the journal