Reviewer’s report

Title: Repair of injured right inferior pulmonary vein during mitral valve replacement

Version: 1 Date: 1 September 2009

Reviewer: KYRIAKOS ANASTASIADIS

Reviewer’s report:

This is an interesting paper from Apostolakis et al. describing a possibly lethal complication of mitral valve surgery the pulmonary vein rupture. This is not a common but a well identified complication in such cases. The reason that it is not described as case report scenario in the literature is stated by the authors: ‘…it should be possibly due to the fact that the cases of this injury are included in the general report as postoperative bleeding or postoperative respiratory insufficiency…’ However, I believe every senior cardiac surgeon has experienced such a scenario in his practice. Hence, I think it is worthwhile of publishing this paper for emphasizing this case and using this paper as ‘how-to-do it’ article, after integrating the following revisions:

General comments
1. The written English has to be improved
2. Introduction and case reporting have to be minimised to the necessary
3. More references have to be integrated to the text
4. Figure 4 is of poor quality and there are no indicating arrows for the understanding of the final surgical construction.

Remarks – Minor Essential Revisions

Abstract – line 3: ‘It is more possible in patients with an anatomically small left atrium’ to be replaced with ‘This is more possible in patients with small left atrium’.

Abstract – line 5: ‘and in addition, its repair may produce late complications’ to be replaced with ‘while its repair may lead to complications’.

Abstract – line 7: ‘This injury should be early diagnosed, before left atriotomy closing and is easily repaired using a patch to avoid any possible late complications’ to be replaced with ‘This injury should be early detected, before left atriotomy closing, and it is suggested to be repaired using a patch so as to avoid any possible late constriction’.

Abstract – line 10: The quote ‘-the first reported in the literature-’ should be omitted because this is a well known complication of mitral valve surgery and the major contribution of this paper should be the early detection as well as the how–to–do it message and not the uniqueness of the case.

Introduction – line 2: In the sentence ‘…through the Sondergaard’s groove
approach’ the word ‘approach’ should be omitted.

Introduction – line 3: ‘the atriotomy begins after partial detachment and retraction of the right atrium from the left, alongside the interatrial groove, at the midpoint between the right superior pulmonary vein’s take off, and the interatrial groove’ should be replaced with ‘the atriotomy comprises partial detachment and retraction of the right atrium from the left followed by incision at the midpoint between the right superior pulmonary vein’s (RSPV) take off and the interatrial groove’.

Introduction – line 7: In the sentence ‘Due to manipulations…’ the quote ‘for mitral valve operation’ should be omitted.

Introduction – line 9: The sentence ‘In the cases of a small left atrium, or of that in which the pulmonary veins are short, or the inferior is more forward to the level of the posterior, the intraoperative risk of pulmonary veins injury is substantial’ is misleading. I suggest to be replaced with the following: ‘In the cases of a small left atrium or short pulmonary veins the intraoperative risk of such injury is substantial’.

Introduction – lines 12-17: the sentences from ‘Rarely … difficult’ can be omitted.

Introduction – line 19: the word ‘later’ should be omitted.

Introduction – line 20: The sentence ‘We report a case…’ can be replaced with the following: ‘We report a case of a successfully repaired injury of the RSPV during mitral valve replacement’.

Case, page 4 – line 1: The first two sentences can be replaced with the following ‘A 77 year old male patient with severe mitral regurgitation and several episodes of pulmonary oedema was referred for urgent surgery’.

Case, page 4 – line 6: The word ‘ruptures’ must be replaced with the word ‘ruptured’.

Case, page 4 – line 7 and 15: the word ‘cordaes’ must be replaced with the word ‘cordae’.

Case, page 4 – line 14: The word ‘locations’ must be replaced with the word ‘segments’.

Case, page 4 – line 15: The word ‘was’ must be replaced with the word ‘were’.

Case, page 4 – line 15: The words ‘considered as’ should be added after the word ‘not’.

Case, page 4 – line 17: The word ‘performed’ should replace the phrase ‘presumed as necessary’.

Case, page 5 – line 1: ‘A biological mitral valve reinforced with teflon felts was used’ should be replaced with the sentence ‘A biological mitral valve was used reinforced with teflon pledgeted sutures’.

Case, page 5 – line 8: ‘The injured structures were repaired by running prolene sutures with intervals of teflon felts’ should be replaced with the sentence ‘The injured structures were repaired by prolene running sutures using teflon felts intermittently’.
Case, page 5 – line 14: ‘It was obvious … towards the left’ is misleading and unnecessary information and can be omitted.

Case, page 6 – line 10: ‘He was … was normal’ can be omitted.

Discussion, page 8 – line 14: ‘(40-45 mm in diameter)’ should be omitted.

Discussion, page 8 – line 16: The phrase ‘In the case of an injured vein, or in an unexplained bleeding from this area, a reinstitution of cardiopulmonary bypass circuit is necessary. Indeed of a “blind suturing” of the …’ should be replaced with the sentence ‘In the case of an injured vein, instead of “blind suturing” of the …’.

Discussion, page 9 – line 3: The sentence ‘Using this technique the tension to the vein’s fragile wall is eliminated, any bleeding is stopped, as well as any possible immediate or future stenosis is avoided’ should be replaced with the sentence ‘With this technique the tension to the vein’s fragile wall is less and local stenosis can be avoided’.

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

**Quality of written English:** Needs some language corrections before being published

**Declaration of competing interests:**

I declare that I have no competing interests