

Pericardial effusion after cardiac surgery: a convenient Approach: case series.

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Background:

Pericardial effusion is a common complication following cardiac surgery, often leading to readmission; severe symptomatic right ventricular (RV) failure, or cardiac tamponade. Management options include anti-inflammatory medications or surgical drainage through a sub-xiphoid approach or re-do sternotomy. In this case series, we propose trans-apical pericardial puncture for managing post-cardiac surgery pericardial effusion, we highlight the safety and feasibility of the trans-apical approach, reproducing the experience with trans-apical procedures for other indications, such as percutaneous aortic valve replacement or closure of paravalvular leakage. The subxiphoid percutaneous techniques are often refused due to concerns about abnormal adhesions and distorted sternum-RV relationships after pericardiotomy.

Surgical drainage is the most prevalent intervention by sub-xiphoid approach or re-do sternotomy, which is associated with general anesthesia, usually challenging in this cohort of patients with severely impaired diastolic filling; loss of sympathetic tone together with vasodilatation may complicate profound shock and complicates cardiac arrest.

Aim and objectives:

We highlight the safety and feasibility of the trans-apical approach.

Methods:

A descriptive study of a case series of 28 patients subjected to this intervention after various cardiac surgery.

Result:

A total of 28 cases presented with severe pericardial effusion, sometimes shock see the table:

Type of patient	Frequency	Comment
Shock O/A	5	
IV sedation	20	Commonly used propofol, rarely dexmedetomidine
MV repair	16	
MVR	4	
VSD closure	3	
CABG	1	
Afib warfarin	18	
Aspirin usage	3	
Recurrent PE	2	
Duration of presentation – intervention	7-28 days	
Need for surgical intervention	2	A case suffered rapid re-accumulation within 24 hours of pig-tail removal, it underwent exploration; bleeding from the LAA stump excised in the original surgery
Failed	2	Failure to evacuate

Patient choice considerations:

- 1- Late pericardial effusion early as early postoperative is suggestive of surgical complications, but after gaining trust in the procedure, earlier under specific conditions is accepted.
- 2- Avoid CABG-fearing graft trauma.
- 3- Echocardiography signs of the feasibility of the approach, a good accessible pocket.

Our experience involved an infant 9 months of age after VSD closure. The referring surgeon claims a lower risk of infection than surgery.

Conclusion:

Trans-apical pericardiocentesis is safe, cost effective, resources control and associated with more patient satisfaction, in different age groups after most of cardiac surgeries.

Keywords:

Pericardial effusion after cardiac surgery, pericardiocentesis after cardiac surgery, cardiac tamponade, pericardiocentesis bare area of the heart