Dilemma between Pericardiocentesis vs Immediate Aortic Repair in Impending Cardiac Tamponade due to Acute Type A Aortic Dissection; A Case Report

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Introduction

- Cardiac tamponade is associated with fatal outcomes for patients with acute type A aortic dissection (AAAD), and the presence of cardiac tamponade should prompt urgent aortic repair.
- Many centers report performing pericardiocentesis in critical cardiac tamponade to release prolonged hypotension and low cardiac output and maintain the patient's condition before doing an urgent aortic repair.
- However, the treatment of the patient with moderate cardiac tamponade remains unclear whether we choose pericardiocentesis first or urgent aortic repair without pericardiocentesis. We report our experience with immediate aortic repair of AAAD.

Case Report

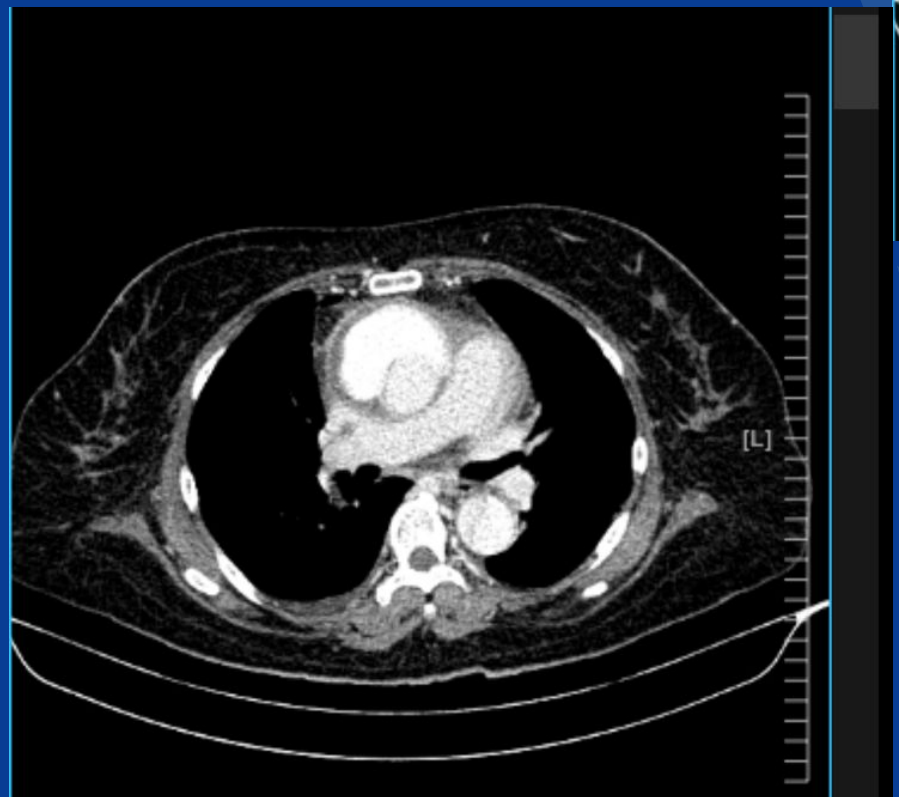
- A 54-year-old female patient was transferred from another hospital with the main complaint of shortness of breath. She also experienced chest pain and epigastric pain.

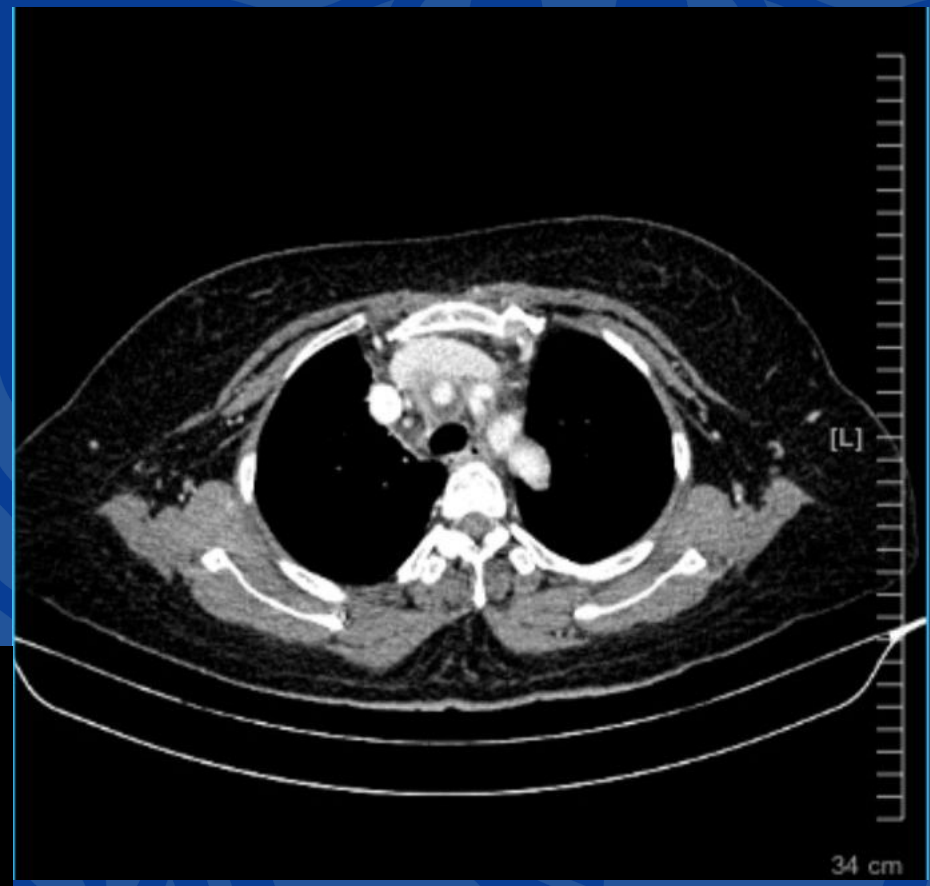
Echocardiography

- Moderate pericardial effusion, EF 63%, TAPSE 3.1 cm, anteroseptal hypokinetic and other segments are normal-kinetic.

CT Scan

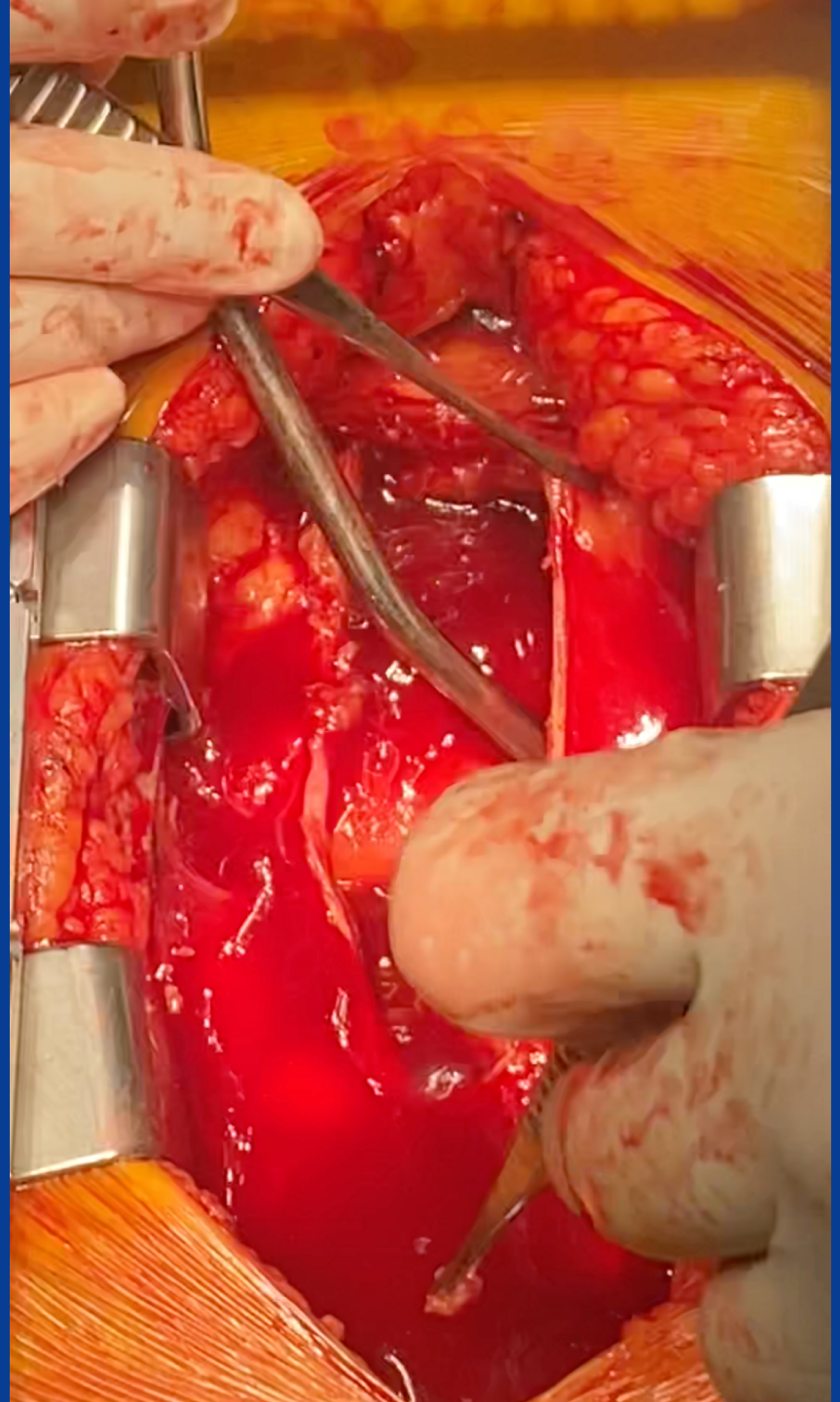
- Aortic dissection Stanford A DeBakey type 1 and fluid accumulation around the heart.

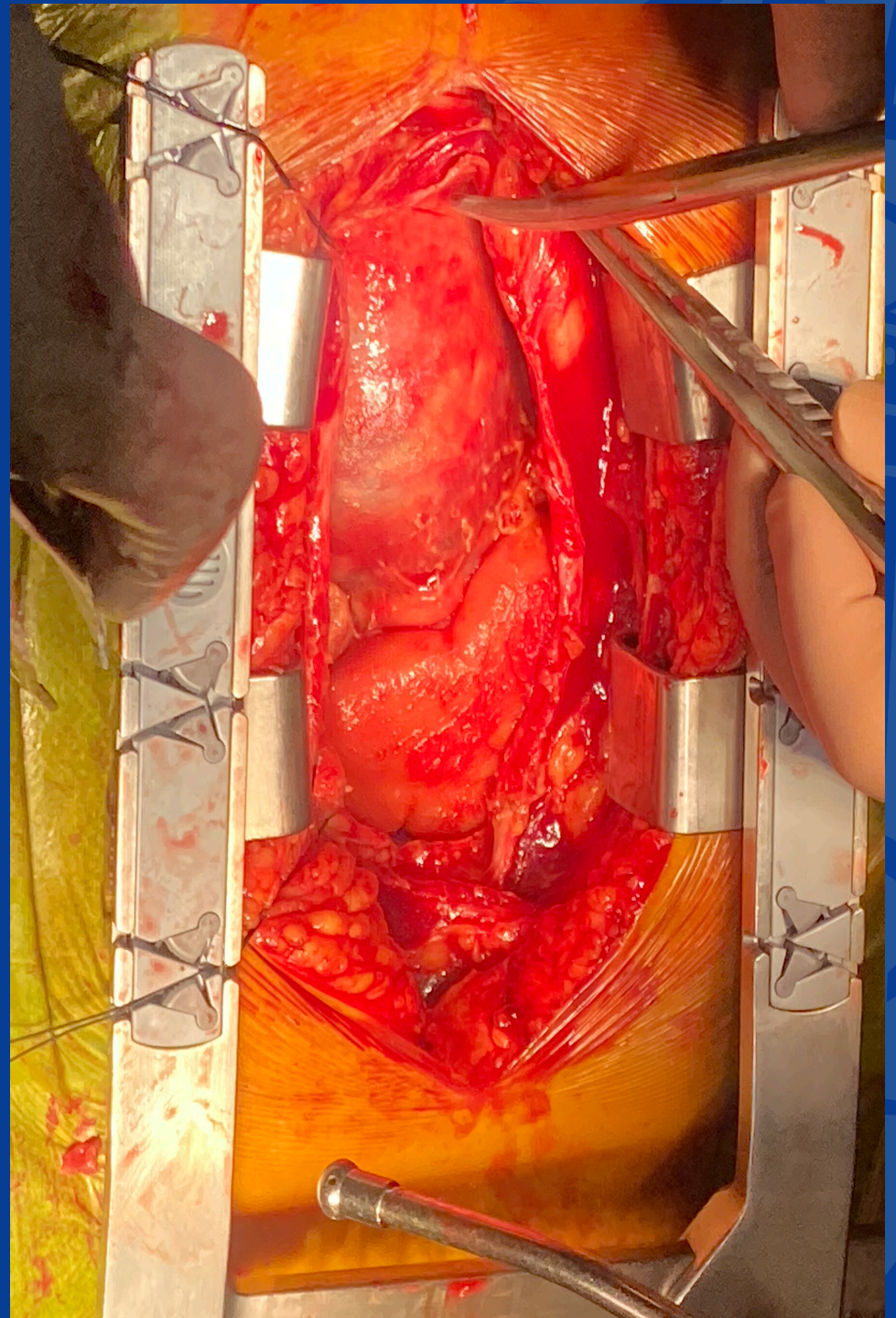


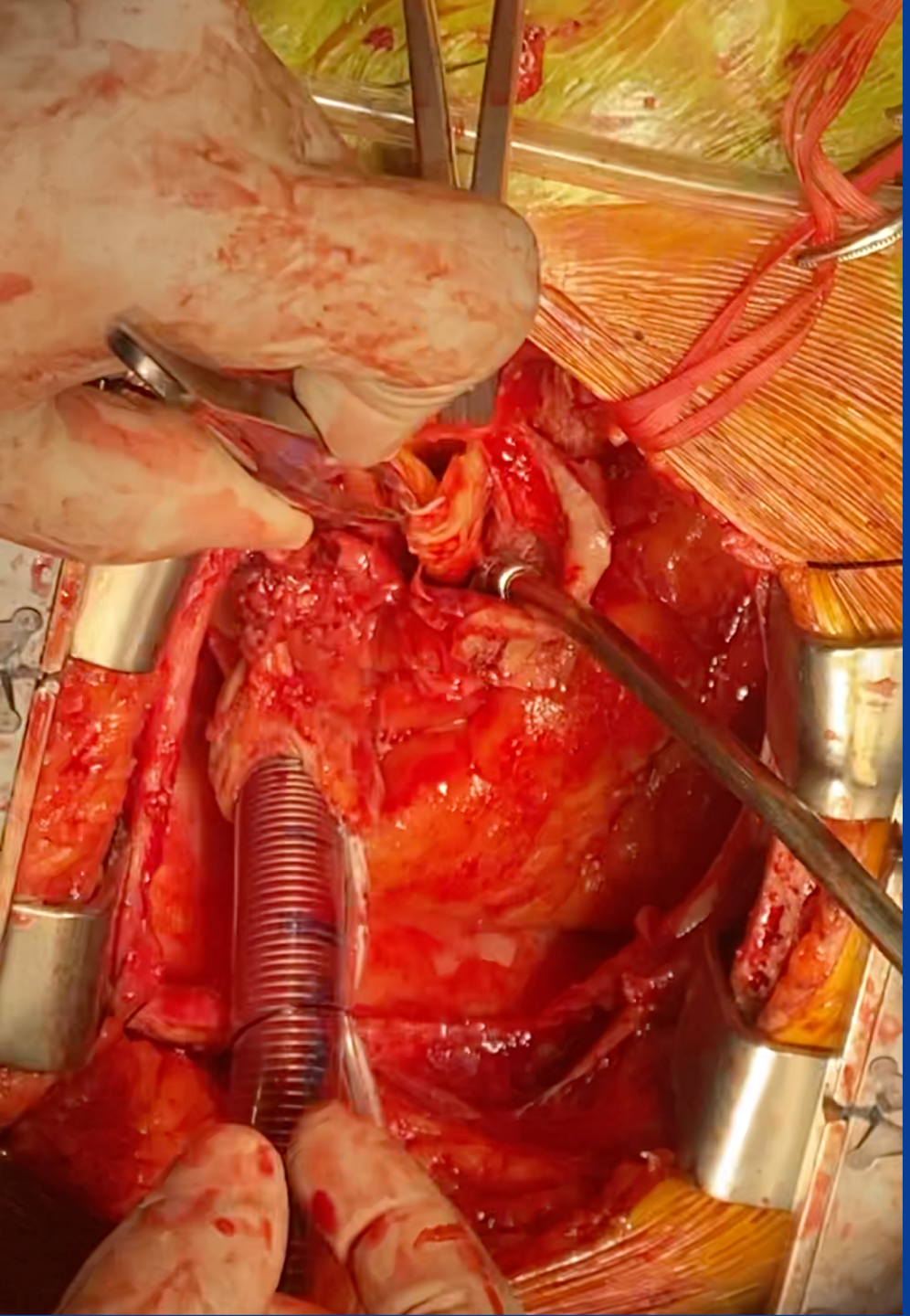


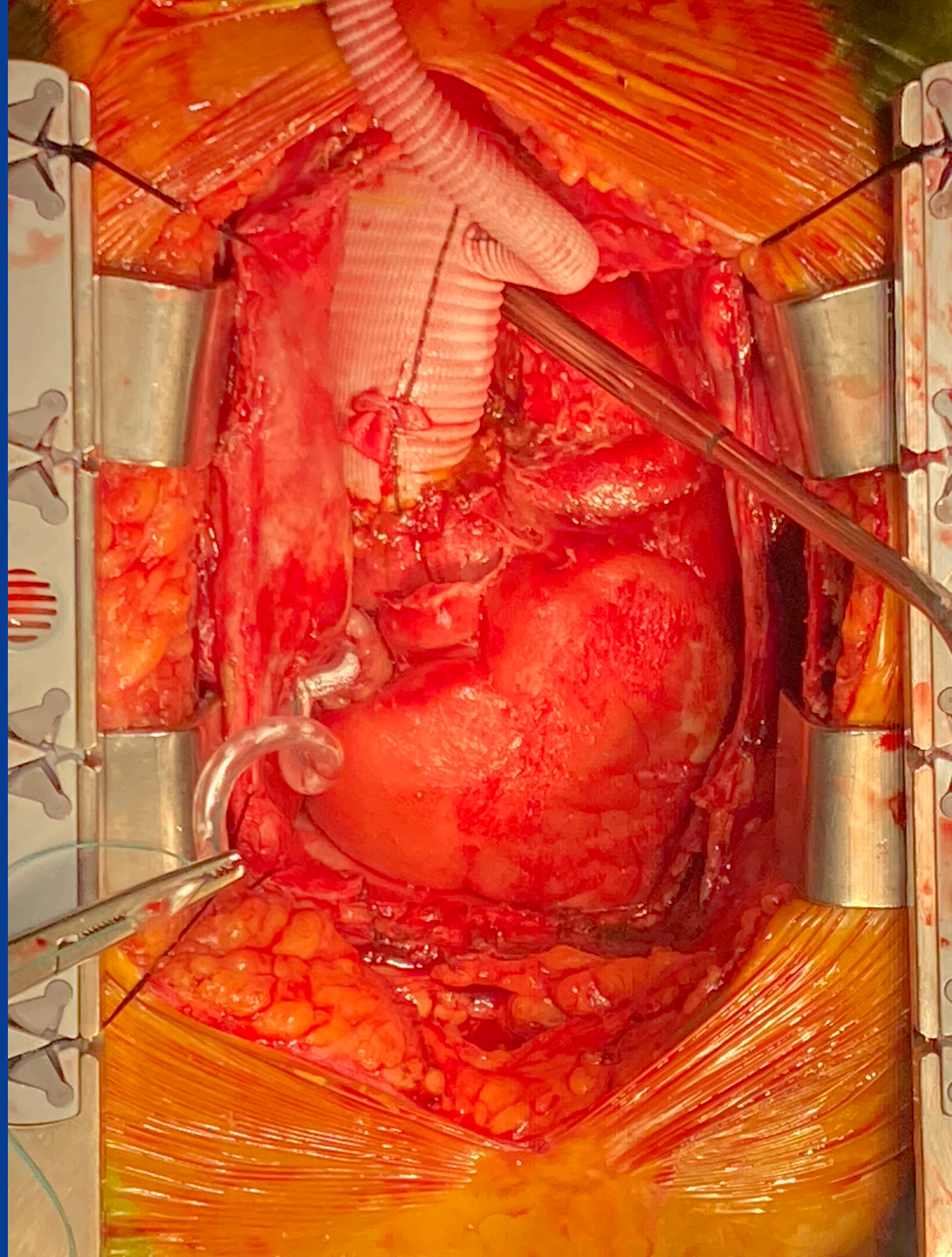
Intraoperative findings

- 400 cc of pericardial blood
- Entry tear on the ascending aorta
- AoX time of 81 minutes, CPB time of 120 minutes, ASCP of 22.47 minutes, and circulatory arrest of 29.28 minutes. The lowest temperature during CPB was 26°C.
- Cannulation technique: femoral artery and right atrium.
- Procedure: Ascending replacement + extended hemiarch









Result

- In this case, we preferred to perform urgent aortic repair without pericardiocentesis because the hemodynamics were still stable.
- If we had performed pericardiocentesis first, the procedure would have only provide temporary relief by reducing the pressure on the heart, but it would not have prevent the progression of AAAD, resulting in a higher mortality rate.

Conclusion

- The choice between these two options may depend on the patient's overall condition, the severity of the tamponade, and the availability of resources and expertise to perform urgent aortic surgery.
- If we are in an aortic center and adequately prepared preoperatively, open aortic repair is a treatment option.