Primary Aortic Thrombus of the Thoracic Aorta: Our Experience

Objective: The entity of primary aortic thrombosis (PAT) is a rare one. It is the presence of an aortic thrombus without underlying aortic atherosclerosis or aneurysm. It presents with end organ ischemia such as distal embolization, mesenteric ischemia and renal infarction. The management for PAT involves anticoagulation alone and/or repair. Options include open or endovascular repair. The management itself is not standardized, and is surgeon dependent.

Methods:
Ten patients (6 female, mean age 49.1 years) between 2016 and 2020 presented with PAT in the thoracic aorta in our facility. All ten patients were tobacco users, and six patients had a hypercoagulable state. Four PATs were located in the ascending aorta, 3 were located in the descending thoracic aorta, 1 in the aortic arch, 1 in aortic root, and 1 in the thoracoabdominal aorta. Two patients developed cerebral infarction, and two had presented with myocardial infarction.

Results:
9 patients underwent open surgical thrombectomy, while 1 patient was managed only medically. Two patients underwent concomitant coronary artery bypass graft, and one patient underwent pulmonary thromboembolectomy. No operative mortalities were observed. The median follow-up was 18 months, and two patients developed recurrence of thrombus secondary to non-compliance with anticoagulation. One patient had required redo-sternotomy for recurrence. Two patients had developed mesenteric ischemia requiring exploration and small bowel resection.

Conclusion: A standard management for PAT has not yet been established. In our experience, open thrombectomy can be performed with low mortality and morbidities. The thrombus can recur, however, in those patients with poor anticoagulation compliance.

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Additional Resources

- [https://files.aievolution.com/prd/aat2101/abstracts/abs_3127/PATppt.pptx](https://files.aievolution.com/prd/aat2101/abstracts/abs_3127/PATppt.pptx)