

Evidence Discussion (PVI.102.A)

Thoracic and Thoracoabdominal Aorta

Surgical repair of the thoracic aorta may be performed for multiple pathologies, the most common being aneurysm and dissection. Emergent cases usually present with symptoms of impending rupture, organ malperfusion or hemodynamic instability. For these cases, advanced imaging is required for surgical planning. Cases of aortic trauma and dissection may involve multiple extrathoracic regions including the abdominal and cerebrovascular vessels. Additional imaging of anatomic regions with suspected involvement are considered necessary in these cases. For chronic aortic dissection and asymptomatic aneurysmal disease, multiple major studies have been conducted to recommend criteria for intervention based on size and anatomic considerations.^{1,2,3}

Ascending aortic aneurysms often require an open repair approach. Most descending thoracic aortic interventions are treated with endovascular repair, but some open or hybrid repairs are still indicated for challenging anatomy. Additional factors that may warrant thoracic aortic imaging and intervention include severe atherosclerosis/stenosis, penetrating ulcer, trauma, connective tissue disease and familial/genetic disorders that predispose patients to dissection and aneurysm formation.⁴ Imaging and intervention needs may vary on a case-by-case basis for definitive treatment.⁵ Endovascular repairs do require additional postoperative surveillance due to their higher incidence of technical complications over time.

References

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