Title: Successful Management of a Bleeding, Penetrating Ulcer of the Thoracic Aorta Secondary to Open Aortic Transection Repair 19 Years Prior

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Objective(s): We describe a delayed presentation and successful management of a bleeding, penetrating ulcer at the proximal descending thoracic aorta 19 years after an open repair of a traumatic aortic transection. Retrospective data indicates that while short-term mortality maybe higher, long-term outcomes for open repair of blunt thoracic aortic injuries have no survival difference when compared to endovascular repair and that endovascular repairs are higher risk for re-intervention and failure.

Methods: Our patient is 50-year-old male who had undergone open repair of a proximal thoracic aortic transection in 1999 at age 37 after a traumatic motorcycle accident. Open repair was accomplished with placement of a 20 mm Hemashield graft under atrial-femoral cardiopulmonary bypass. He presented to the emergency department in February 2018 with recurrent hemoptysis and chest pain. He has a history of DVT on eliquis and because of his history and symptoms, he was evaluated with a CT pulmonary embolism protocol. The imaging was negative for pulmonary embolism, however it was significant for a proximal penetrating ulcer of the thoracic aorta consistent with an aortopulmonary fistula (Image 1).

Results: The patient underwent successful, urgent placement of a 32 mm Zenith Alpha graft. The graft was placed from just distal to the left subclavian artery and just past the isthmus of the descending thoracic aorta. The graft completely excluded the ulcer (Image 2). Post-operative CTA of the chest also demonstrated complete exclusion of the ulcer. His post-operative course was uncomplicated and he was discharged home on post-operative day one.

Conclusions: Our case highlights a delayed and unusual presentation of a rare complication following open repair of a traumatic, descending thoracic aortic transection. Though practice patterns are trending toward endovascular repairs, studies suggest that when patient selection is appropriate open repair of blunt thoracic aortic injuries are durable long-term.