

Endovascular repair of a thoracic aortic transection 31 years after blunt trauma

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A 46-year-old woman presented with a 3-month history of persistent cough and hoarseness with anterior chest pain. A chest radiograph revealed a large upper lobe mass with obliteration of the left lung field. She soon developed hemoptysis, and computed tomography was performed urgently. This showed a ruptured 13-cm thoracic aortic pseudoaneurysm (A). Further inquiry revealed that she was involved in a severe motor vehicle accident at 15 years of age. She was in a “coma” for many weeks, but the patient did not remember any chest trauma or surgery. The patient was urgently taken to the hybrid operating room. Aortography showed a large pseudoaneurysm distal to the subclavian consistent with previous transection (B/Cover). Through femoral access, two TAG devices (W. L. Gore & Associates, Flagstaff, Ariz) were placed (C). Balloon angioplasty was not performed. The patient was discharged on postoperative day 2 doing well with no neurologic sequelae. At 6-month follow-up, the patient was doing well with resolution of all symptoms. Computed tomography angiography showed no endoleak and the aneurysm sac to measure 9.6 cm in diameter (D). There was re-expansion of the lung field as well. The patient has consented to the publication of this report along with its accompanying operative images.

DISCUSSION

Aortic transection remains one of the leading causes of death during blunt trauma. The majority of victims, up to 75%, die before reaching a care facility.¹ Those who do present to the hospital in most cases have multiple other severe injuries. Historically, open repair had high mortality and morbidity rates, up to 50% and 80%, respectively.² Therefore, thoracic endovascular aortic repair has replaced open repair as the preferred method of treatment at most centers. Studies have shown lower complication rates with excellent technical success rates and long-lasting results with thoracic endovascular aortic repair.³ Recently, it has been shown that surgery can be delayed in selective cases to allow treatment of other injuries and time for the patient’s overall condition to improve with continued good outcome.³ In some cases, the transection is missed, with long-term pseudoaneurysm expansion and eventual complications. Here, we presented a case of delayed repair of a transection that occurred >30 years previously with excellent results.

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