

Thoracic Aorta Artery - Endovascular Treatment

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Abstract:

Trauma to the Thoracic Aorta is a common injury in patients with blunt chest trauma and polytrauma in general (1), its association with injuries in other territories adds significant morbidity and mortality. In those patients in whom this lesion is suspected, a Multislice Axial Tomography should be performed, with intravenous contrast (2). Its correct management and treatment constitute an emergency (3,4,5). Endovascular treatment is considered a valid option in these cases (6,7). Some lesions may be susceptible to conservative medical treatment (8,9).

keywords: blunt chest trauma; thoracic pseudoaneurysm; polytrauma; endovascular treatment

Introduction

Trauma to the Thoracic Aorta is a common injury in patients with blunt chest trauma and polytrauma in general (1), its association with injuries in other territories adds significant morbidity and mortality. In those patients in whom this lesion is suspected, a Multislice Axial Tomography should be performed, with intravenous contrast (2). Its correct management and treatment constitute an emergency (3,4,5). Endovascular treatment is considered a valid option in these cases (6,7). Some lesions may be susceptible to conservative medical treatment (8,9).

Clinical Case

male, 21 years old. He is admitted after having suffered motorcycle vs. wall trauma. Hemodynamically stable, with dyspnea, chest pain, severe trauma to the right lower limb. Brain and Thoracoabdominal CT, and other pertinent studies, were requested. The diagnosis was: absence of acute lesions at the brain level, right hemopneumothorax, descending thoracic aortic artery pseudoaneurysm at the level of the isthmus,

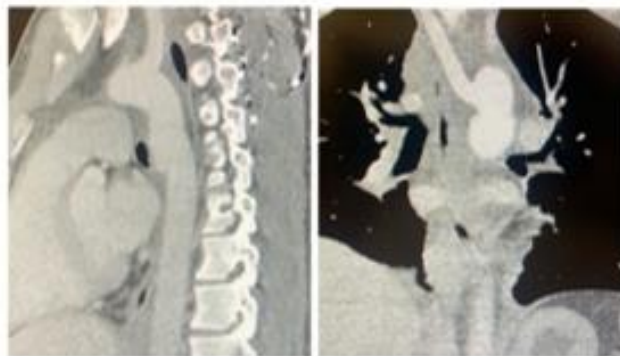


Fig. 1

Fig. 1: TAC Torácica donde se evidencia pseudoaneurisma de arteria aorta descendente a nivel del istmo.

with aberrant right subclavian artery (Figure 1),

absence of injuries to intra-abdominal solid organs, right femur fracture. In the shock room he suffered from arterial hypotension, which was reversed with fluid replacement and low-dose vasoactive drugs. The femur fracture was stabilized, a right pleural drainage tube was placed, and urgent treatment of the aortic injury was indicated.

The same was resolved by placing 2 CP Stent Lined Stents. NuMed – Braum 24 mm diameter x 45 mm length: Platinum-Iridium Stent with ZIGS configuration, coated with PTFE Stent with good radial strength and

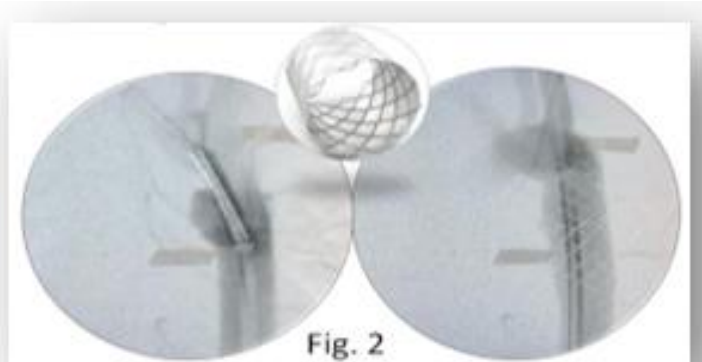


Fig. 2: Imagen de Angiografía Intraoperation, colocación de stent. (Izquierda, posicionando stent) – (Derecha, stent abierto)

with the possibility of future re-expansion (Figure 2).

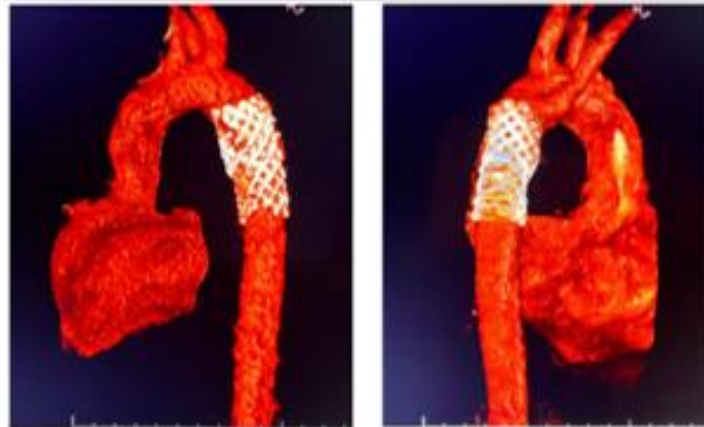


Fig. 3: Reconstrucción 3 D TAC Torácica donde se muestra stent, sin observarse fugas de contraste a pseudoaneurisma.

Post-surgical course in ICU with imaging control using AngioTAC at 48 hours (Figure 3),

where the correct positioning of the Stents is confirmed, without filling of the pseudoaneurysm sac or presence of leaks.

Conclusions: In our experience, we consider that in severe trauma, aortic injuries should be actively ruled out with a Thoracoabdominal CT on admission. Placement of an aortic stent should be done as soon as possible if a major vascular injury is detected.

We believe that the most important thing in this type of trauma is to make an early diagnosis in the face of strong clinical suspicion.

which will allow us to optimize the therapeutic options and times in each case, as well as carry out correct monitoring of the injuries.

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