

Image in cardiology

Retrograde aortic dissection after endovascular stent-graft placement

Disección aórtica retrógrada tras colocación de prótesis endovascular

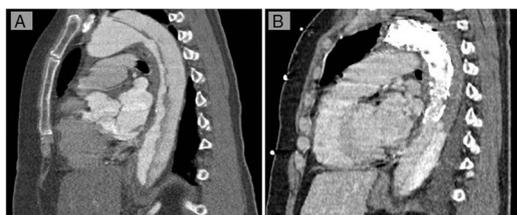
Juan Daniel Prieto Cuadra,^{a,*} Ana Isabel Álvarez Mancha,^a and Joaquín Lucena Romero^b^aServicio de Anatomía Patológica, Hospital Universitario Virgen de la Victoria, Málaga, Spain^bServicio de Patología Forense, Instituto de Medicina Legal y Ciencias Forenses, Sevilla, Spain

Figure 1.

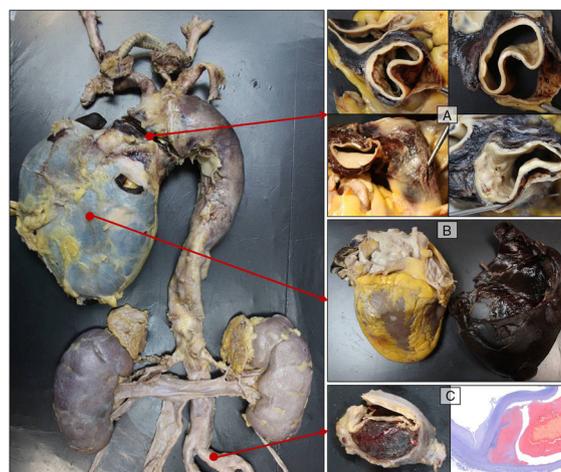


Figure 2.

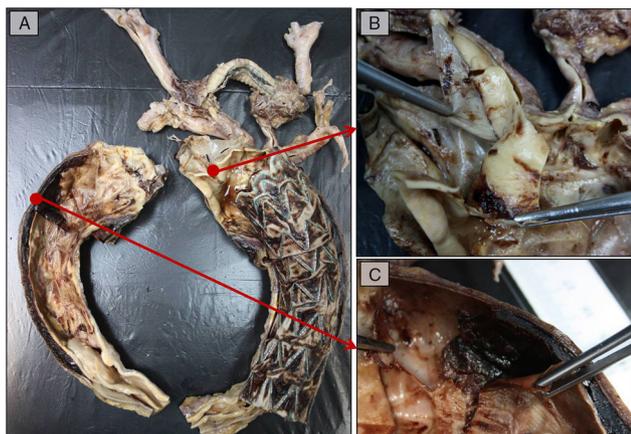


Figure 3.

A 57-year-old woman with a history of hypertension, atherosclerosis, and smoking was admitted to hospital with chest pain.

Computed tomography angiography (Figure 1A) showed a Stanford type B thoracic aortic dissection, beginning distal to the left subclavian artery and extending to the abdominal aorta, with an intimal flap reaching the infrarenal region and a mural thrombus in the left common iliac artery (Figure 2C).

She was treated with an endovascular stent, but developed a type 1 endoleak, so a proximal extension, flush with the right brachiocephalic trunk, and a right-left carotid-carotid bypass were performed.

A repeat computed tomography angiography was performed due to chest pain (Figure 1B), which showed patent stents and vessels and the beginnings of a thrombus in the false aortic lumen. The patient developed severe hypotension in addition to her chest pain, and eventually died.

The patency of the endovascular stent-graft was confirmed by autopsy (Figure 3A). The point of rupture and myointimal separation was identified (Figure 3C), with retrograde progression of the false lumen extending to the proximal portion of the right brachiocephalic trunk (Figure 3B), ascending aorta and aortic root, without involving the coronary ostia, making it a Stanford type A thoracic aorta dissection (Figure 2A). There was also a tear in the adventitia of the posterior ascending aorta and hemopericardium (Figure 2B).

Retrograde progression of aortic dissection is a complication of endovascular treatment that occurs in approximately 2% of patients. It is potentially rapid and fatal, conferring high in-hospital mortality, especially if hypertension persists after the intervention.

* Corresponding author:

E-mail address: danielprieto@hotmail.com (J.D. Prieto Cuadra).

Available online 18 June 2019