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# Anastomotical pseudoaneurysm rupture as a late complication of thoracic aortoplasty with patch. About a case☆

## Rotura de seudoaneurisma anastomótico como complicación tardía de aortoplastia torácica con parche. A propósito de un caso

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We present the case of a 52-year-old man who underwent surgery for aortic coarctation (CoAo) at the age of 17. After the episode of sudden unrecovered death, a complete medico-legal autopsy was performed, which revealed a 5×5 cm saccular dilatation at the level of the aortic isthmus (Fig. 1), with a transverse rupture area and irregular borders on the anterosuperior aspect (Fig. 2). A 3.5×3.5 cm Dacron® patch (Fig. 3) with partial dehiscence of the proximal suture was observed on the anterior aspect of the aortic isthmus (Fig. 4). Thoracic autopsy demonstrated massive left haemothorax. The cardiac study revealed moderate–severe multivessel coronary atheromatosis and type 0 bicuspid aortic valve. The rest of the autopsy showed no other findings of forensic interest. Toxicological studies on blood and vitreous humour were negative.

CoAoA is a congenital narrowing usually located in the descending thoracic aorta, distal to the origin of the left subclavian artery, producing a decrease in blood flow distal to it.[1] In milder cases, the diagnosis may be made in adulthood.[2] In neonates, children, and adolescents, open surgical repair by patch aortoplasty is usually performed. This technique was first performed by K. Vossschulte in 1957[3] with the aim of reducing the high percentage of recoarctation with resection and end-to-end suturing of the aorta.

Patients who received open or endovascular surgical treatment of CoAoA can develop late complication[4] such as aortic aneurysms and pseudoaneurysms. The frequency of pseudoaneurysms in patch aortoplasty is higher than in other surgical techniques, with an estimated risk of rupture of 16% at 5 years, when their size is between 4 and 5.9 cm. Mortality in case of pseudoaneurysm rupture is 97%.[5]

Therefore, due to the potentially serious and sometimes fatal complications of this disease, it is recommended that patients be monitored for prevention and early treatment.

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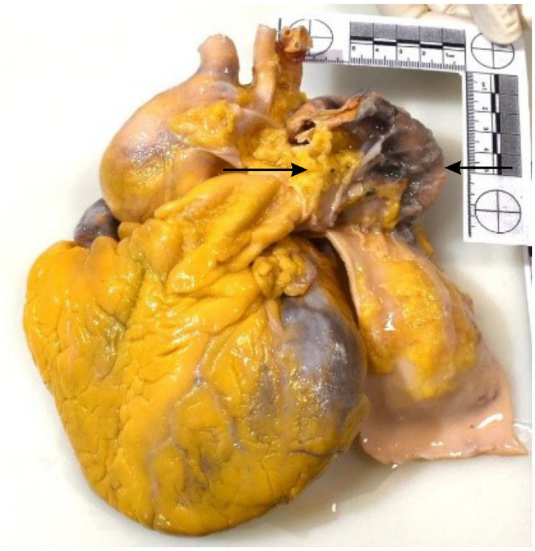

**Fig. 1** Saccular dilatation at the level of the aortic isthmus of 5×5 c.

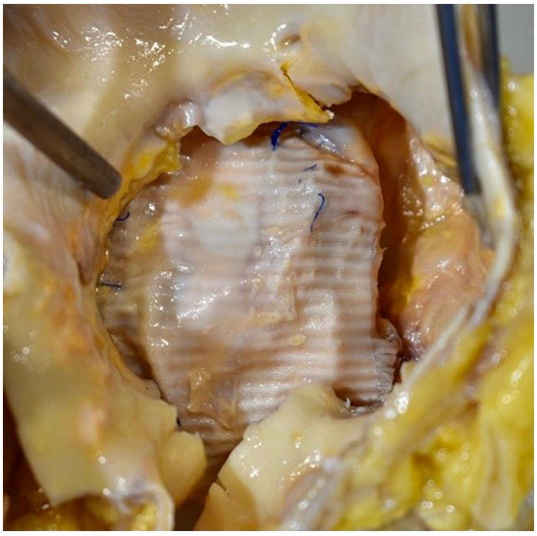

**Fig. 3** Dacron® patch located on the anterior aspect of the aortic isthmus.

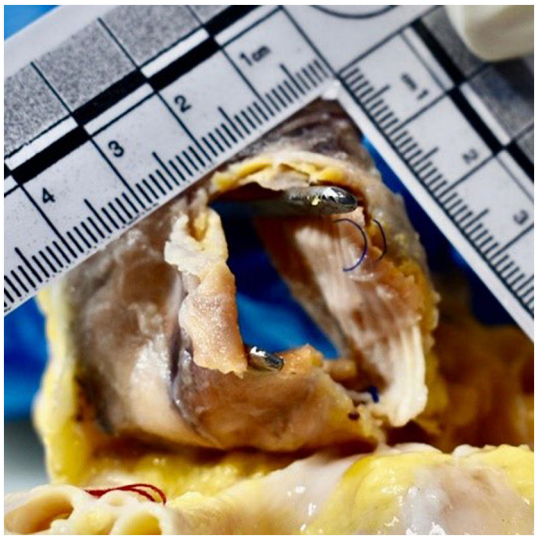

**Fig. 2** Area of rupture of the pseudoaneurysmal sac. The Dacron® patch sutured with monofilament can be seen on the anterior aortic wall.

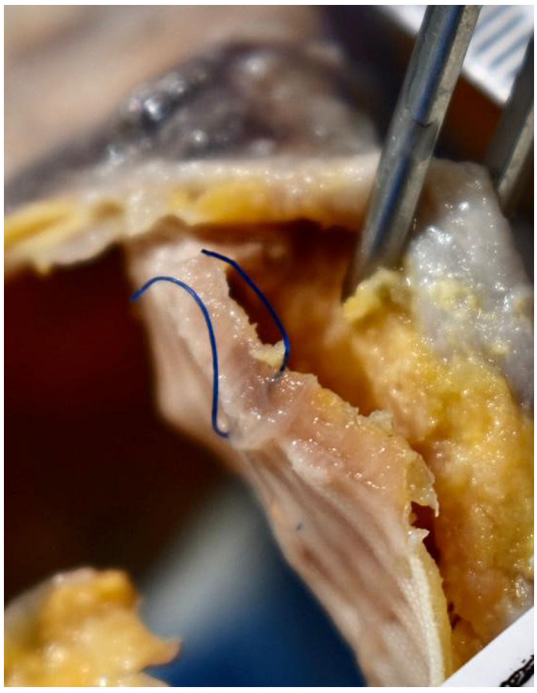

**Fig. 4** Image showing the dehiscence of the proximal stitches and the separation of the patch.

## Final diagnosis

Massive left haemothorax secondary to ruptured aortic anastomotic pseudoaneurysm.

## Conflict of interests

The authors have no conflict of interests to declare.

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