

Case Report

## Aortocutaneous fistula complicating a pseudoaneurysm of the thoracic aorta—a necropsy report

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### Abstract

This article presents the necropsy report on a 60-year-old male patient with a large thoracoabdominal aortic aneurysm complicated by a protruding dorsal mass (pseudoaneurysm) and aortocutaneous fistula. This is the first reported case of a spontaneous aortocutaneous fistula complicating the natural course of a thoracic aortic aneurysm. © 2007 Elsevier Inc. All rights reserved.

*Keywords:* Aortic aneurysm; Aneurysm; False; Fistula

A 60-year-old male patient was admitted to the Professor Edgard Santos Teaching Hospital reporting abdominal pain over a period of about 2 years. Ten months before the referred hospital admission, a large mass started to grow on the dorsal surface of the left hemithorax. The patient refused to undergo surgical correction, and the dorsal mass eventually fistulized 5 days prior to hospitalization.

The fistula bled continuously, and the patient suffered two hypovolemic shocks in 3 days. The patient died on the 7th day after admission, following additional protrusion of the dorsal mass with new hemorrhagic foci.

At necropsy, a large dorsal mass measuring 22 cm with a hemorrhagic ulcer of 11 cm was noted (Fig. 1). Saccular dilation of thoracic aorta was observed distally to the left subclavian artery ramification measuring 9 cm in circum-

ference and with a ruptured area of 5 cm. A thrombotic mass of 22 cm in diameter covered the rupture zone of the aortic aneurysm and extended into the external ulcer and chest bones (Figs. 2 and 3) and adhered to the right lung. Fractures were detected from the ninth to the eleventh left ribs, as well as erosion from the eighth thoracic to the first lumbar vertebrae (Fig. 4). Atherosclerotic plaques were



Fig. 1. External appearance of pseudoaneurysm of the thoracic aorta with hemorrhagic ulcer.

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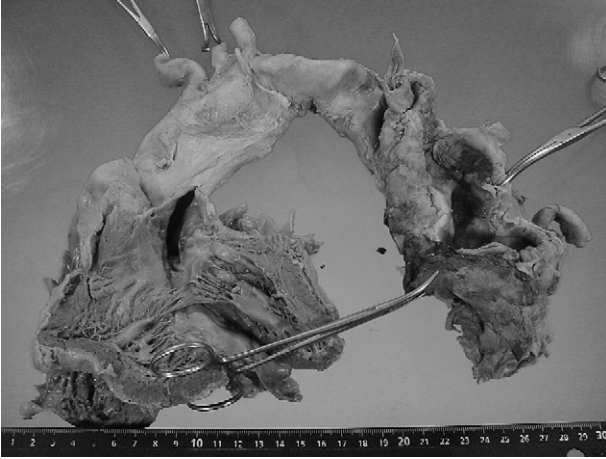


Fig. 2. Heart and aneurysmatic aorta showing saccular dilation and rupture.

florid in the thoracic aortic segment proximal to the rupture, whereas they were rare and mild in the upper abdominal aorta.

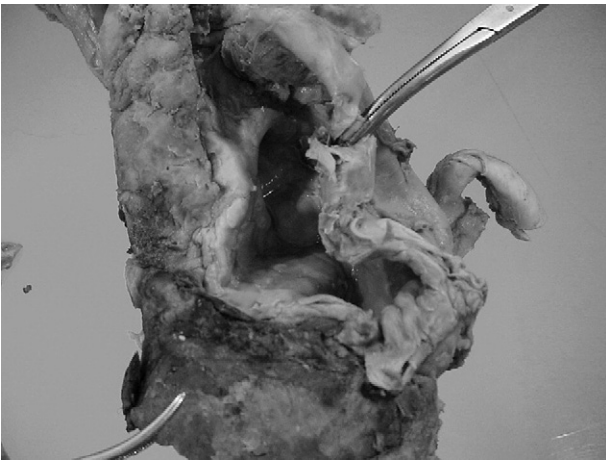


Fig. 3. Saccular aneurysm showing border of ruptured area (upper clamp) and zone of fibrotic adhesion to the right lung (lower clamp).

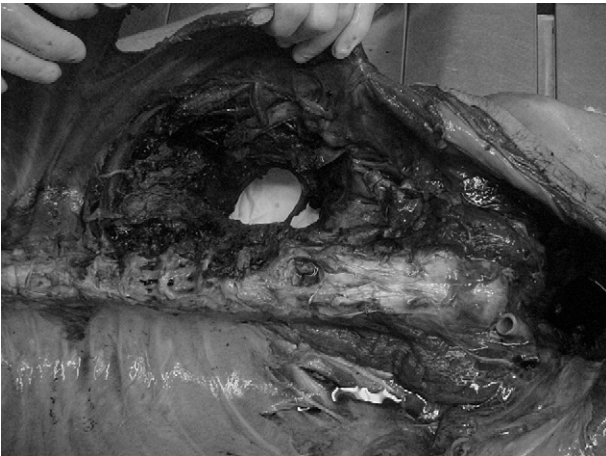


Fig. 4. Posterior chest wall after removal of thrombotic mass. Note rib fracture and vertebrae erosion.

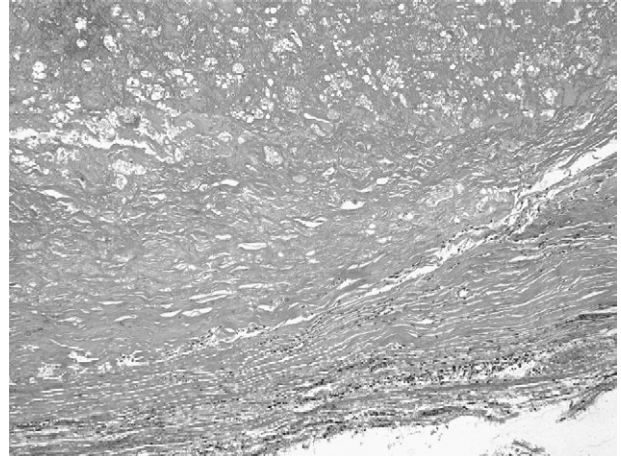


Fig. 5. Photomicrograph of the pseudoaneurysm close to the rupture zone. The thrombus is attached directly to the media layer (hematoxylin and eosin, original magnification  $\times 10$ ).

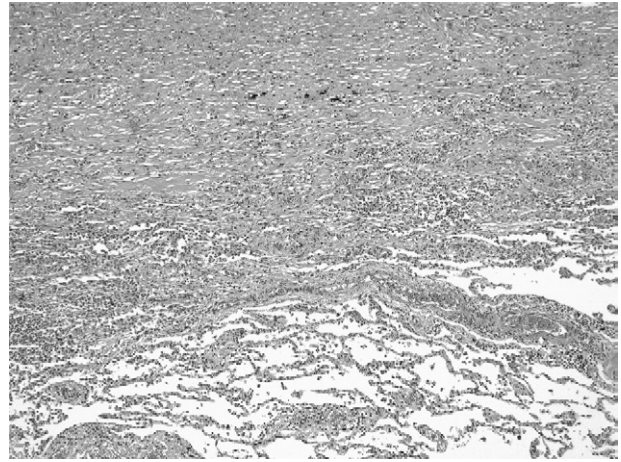


Fig. 6. The ruptured pseudoaneurysm was contained by surrounding tissues. Photomicrograph of the thrombotic mass attached to the right lung (hematoxylin and eosin, original magnification  $\times 10$ ).

Microscopic examination of the thoracic aortic sections confirmed the morphological findings of atherosclerosis and recent thrombosis. Next to the rupture zone, recent thrombus adhered directly to the media or adventitia layers (Fig. 5). The large thrombotic mass was contained by surrounding tissues such as the right lung (Fig. 6).

Aortocutaneous fistulae have already been reported in thoracic aortic aneurysms, but reports in the literature are restricted to cases related to surgical procedures and/or infection of surgical wounds [1].

## Reference

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