Pseudoaneurysm of the thoracic aorta: Endovascular treatment, a case report

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ABSTRACT

Pseudoaneurysm of the thoracic aorta is a not frequent pathology that puts the patient's life at risk. Next, the case of a female patient is presented. She is eighty years old, and comes to the hospital because of a recently appeared left-axillary tumor mass. The imaging studies performed resulted in the diagnosis of a giant pseudoaneurysm of the descending thoracic aorta. Given the conditions of the patient and the pathology, it was decided to solve the case via the endovascular route.

Key words: Thoracic aorta. Endovascular. Pseudoaneurysm.

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INTRODUCTION

Pseudoaneurysm of the thoracic aorta is a rare pathology that puts the patient's life at risk. It is estimated that 2% to 5% of pseudoaneurysms are post-traumatic (open or closed)[1], however, they can also occur after a thoracic and/or cardiovascular surgery in 0.5% of cases[6], especially if the procedure involved the aorta. It is also described that they can appear as a consequence of an infectious process that colonizes the artery (TB, brucellosis, syphilis)[2,4,10].

The diagnosis is made by imaging studies (radiography, ultrasound, angiotomography, nuclear magnetic resonance and/or angiography).

The treatment can be made through open or endovascular surgery.

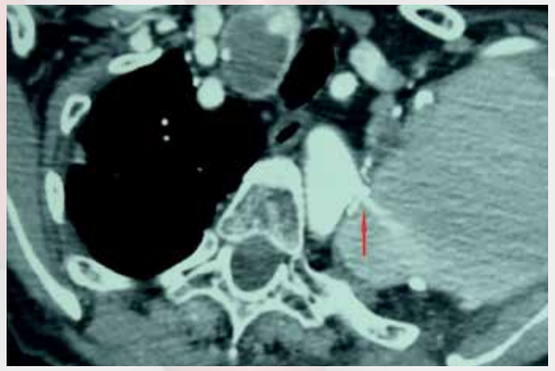
CLINICAL CASE

It was presented the case of a fragile, 80-year-old adult woman who comes to the hospital due to haemoptysis associated with a recently appeared left-axillary mass (after the effort).

As important background information, the patient reports having had tuberculosis in her left lung, having suffered upper left lobectomy at 25 years old, after which there was a residual cavity that, for some reason, is not documented, and for which she required thoracoplasty 10 years later. Currently, she suffers COPD. The physical examination revealed a pulsatile mass of approximately 10 cm × 15 cm., located in the left-axillary region, which even involved part of the pectoral area on the same side. On auscultation, a systolic murmur of II / IV was evident (Figure 1).

Figure 1. Xxxxx

Radiological studies were carried out (ultrasound, angioTEM of thorax and angiography), showing all of them a pseudoaneurysm of the descending thoracic aorta, originated immediately after the emergence of the left subclavian artery (Figures 2 and 3). Due to the multiple comorbidities and the magnitude of this pathology, the repair of the defect by endovascular route was carried out.



Figur3e 2. Xxxxx

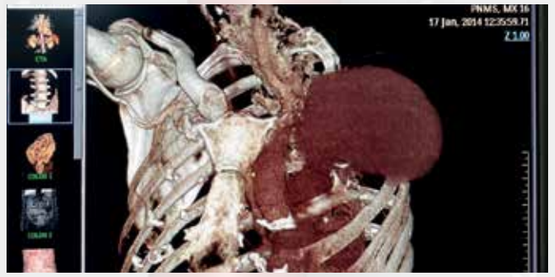


Figure 3. Xxxx

With the patient under general anesthesia and intubated, the right femoral artery is dissected, and a Valiant® Medtronic thoracic endoprotesis was placed.

The patient was transferred to the Intensive Care Unit (ICU) where she progressed with hospital-acquired pneumonia that required mechanical ventilation and antibiotic treatment. Finally, she was definitively discharged 21days after the surgery.

From the cardiovascular point of view, the patient is stable (in March 2018 she will complete four years of monitoring). Unfortunately, she never agreed to be controlled with AngioTEM, however, there is indirect evidence that the problem has been controlled, since she has not repeated hemoptysis and the tumor has been almost entirely reduced (Figure 4).

Figura 4. Xxxxxx

DISCUSSION

Pseudoaneurysm of the thoracic aorta is a rare pathology. Most of the time, it appears as a consequence of a thoracic trauma, whether open or closed[1] or postoperative[6], but it is also described in the literature that may be the consequence of an infectious process (Tuberculosis, brucellosis, syphilis)[2,4,10].

In this case, there is no history of thoracic trauma and there is no information of postoperative trauma (the patient denies complications related to the surgeries carried out). The history of having had Tuberculosis could be the cause. However, there is no certainty as there is no anatomical-pathological study to prove it.

The treatment of choice was endovascular repair. In accordance with the guidelines prepared by various societies of Cardiology, and of Interventional, Cardiothoracic and Vascular Surgery, this procedure has a level of evidence I and grade of recommendation B[5].

The endovascular route has gained popularity in the last two decades due to the fact that it is technically simpler, and morbidity and mortality rates have been reduced in relation to the correction by open surgery; even in emergency cases. The advantages are clear: less surgery time, no need to clamp the aorta or to use extracorporeal circulation, less use of blood components, among others[7,9].

In conclusion, endovascular surgery is emerging as the treatment of choice for this pathology. Studies carried out so far show encouraging results.

CONTRIBUTION OF THE AUTHORS
Mauricio Bassino and Ricardo Arce participated in the study, diagnosis and treatment of the case.
Mauricio Bassino developed the manuscript.

AIDS OR SOURCES OF FINANCE
EQUIMEDIC, representative of MEDTRONIC at that time, sent a “Proctor” (Dr. Napoleón Delgado Salazar) to supervise the procedure.

CONFLICT OF INTEREST
The authors do not report conflicts of interest regarding the present manuscript.

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