

CORRECTION OF ROTARY ABDOMINAL ANEURISM: CASE REPORT

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Abstract: This report addresses the case of a 65-year-old man, who presented with abdominal pain, sweating and hypotension for 3 days and who, when looking for an emergency room, was diagnosed with a ruptured abdominal aortic aneurysm (AAAr), of the juxtarenal type in anterior wall. He was referred and underwent emergency surgery for transperitoneal access repair. Abdominal aortic aneurysm (AAA) results from endothelial weakness that precedes the abnormal dilation of more than 50% of the arterial wall. AAAr is a surgical emergency, with a mortality rate of 80% to 90% of cases. About a third of patients die before reaching the hospital and only 50% of patients undergoing surgical repair survive the perioperative period. Tears can occur in the posterior, lateral or anterior wall of the abdominal aorta. Those on the posterior or lateral wall are tamponade by compression by adjacent structures, a fact that makes surgical correction feasible as the patient maintains hemodynamic stability. Anterior wall ruptures tend to progress with massive hemorrhages into the peritoneal cavity, as they do not progress with immediate packing, increasing the mortality rate in these cases. The relevance of this case lies in the rare clinical presentation of a pathology with high mortality in which there was tamponade of the anterior rupture by external factors, which enabled surgical correction. Mastering the different clinical presentations of this pathology is important for timely diagnosis and treatment, which has a positive impact on the morbidity and mortality of ruptured abdominal aortic aneurysms.

Keywords: Ruptured aneurysm, abdominal aorta, juxtarenal.

CASE REPORT

65-year-old man, hypertensive, with coronary artery disease, smoker, complaining of continuous abdominal pain for 3 days, of

spontaneous onset, located in the left flank that evolved with worsening for 24 hours, becoming diffuse, radiating to the lumbar region, of intense and progressive character, with no improvement factor, associated with sweating and hypotension, sought medical assistance in the emergency department, being submitted to Computed Tomography (CT Angiography) of the abdomen demonstrating a dilated aneurysmal airway in the infrarenal region, with spindle-shaped morphology, with diameter maximum transverse length of 7.5cm, with a dense content inside, suggesting a probable hematic origin compatible with a chronic mural thrombus, more evident on the left, with extension of the hematoma to the anterior pararenal fascias and posterior perirenal fascias considering the hypothesis compatible with an Aneurysm of ruptured Abdominal Aorta (FIGURE 1), being transferred to a reference hospital Hospital Univ President Dutra Hospital (HUPD) for surgical correction (FIGURE 2) and prosthesis placement (FIGURE 3). On admission, the patient was stable, without vasoactive drugs, eupneic on room air, saturating 97%, with heart rate 70 BPM and blood pressure 150x94 MMHG, Glasgow = 15. In the transoperative period, the patient evolved with hemodynamic instability, massive bleeding, requiring replacement of 3 packed red blood cells and Cell Saver (intraoperative auto-transfusion of 350 ml), plus 01IU (UNIT) of platelets, in addition to 100 meq of bic. The postoperative patient evolved with the use of VAD (Noradrenaline 15ml/h), intubated and sedated, with BP: 160X100, HR: 63 bpm, evolved hemodynamically stable, being performed extubation and intensive care until total improvement of hemodynamic parameters, where he received discharged for outpatient follow-up six days after surgery.



Figure 1. Abdominal computed tomography angiography demonstrating dilated aneurysmal airway in the infra-renal region.



Figure 2. Intraoperative photo of ruptured abdominal aortic aneurysm in anterolateral wall E.

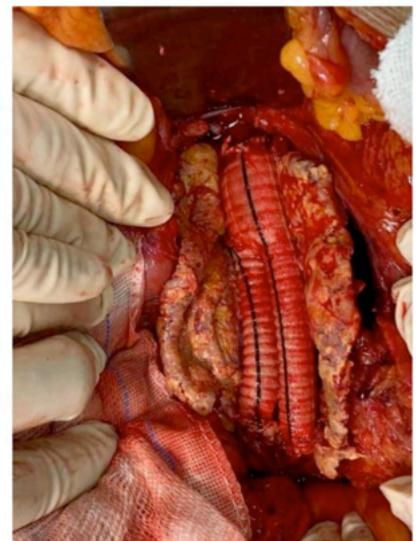


Figure 3. Intraoperative photo of abdominal aortic aneurysm corrected by extraperitoneal approach with Dacron graft.

DISCUSSION

Abdominal pain is one of the most common emergency complaints. Therefore, there is a need for an approach that assesses the condition syndromically so that the appropriate management can be instituted according to each etiology. Acute abdomen can be characterized by sudden and/or progressive pain in the abdominal region in patients who have not suffered trauma. And it may be associated with signs and symptoms such as fever, hypotension, nausea, vomiting, peritonitis, and other classic signs (MAGALHAES et al, 2019). Furthermore, it is classified as hemorrhagic, inflammatory, obstructive, vascular and perforative according to its etiology (EDELMUTH; RIBEIRO, 2011).

The vascular acute abdomen represents the highest morbidity and mortality rate, with rates between 85% and 95%, having as one of its main etiologies the ruptured Abdominal

Aortic Aneurysm (AAAr) (FEITOZA et al, 2018). AAA is a disease that affects mostly elderly males, whites, smokers, people with hypercholesterolemia, systemic arterial hypertension, COPD and with a family history of the disease. AAAs can be classified into type I (infrarenal abdominal aorta), type II (justarenal), type III (pararenal) and type IV (thoracicabdominal). Most cases are asymptomatic, with the most frequent and fatal complication being aneurysmal rupture (PORTUGUESE JOURNAL OF CARDIO-THORACIC AND VASCULAR SURGERY, 2019).

Factors that correlate with increased risk of AAA rupture include smoking, systemic arterial hypertension, rapid growth, and a history of kidney or heart transplantation. The clinical picture of the rupture presents with a classic triad, composed of sudden and intense low back pain, syncope/hypotension and pulsatile abdominal mass on physical

examination. However, less than half of the cases manifest with these symptoms (DE ASSIS; DUQUE, 2020)

Early recognition of imaging findings can modify the prognosis and therapeutic approach. Computed tomography angiography (CT angiography) is the imaging exam of choice. The main finding on CT angiography that characterizes the rupture is the retroperitoneal hematoma adjacent to the affected aortic segment, which can extend to the pararenal, perirenal, psoas muscle and intraperitoneal space spaces (CORREA et al, 2019). In the contained ruptured aneurysm, tamponade by adjacent structures occurs and the draped aorta sign is visualized on angio-CT, where the posterior wall of the aorta or the plane of periaortic fat is seen.

Juxtarrenal AAA is classified as a thoracoabdominal aneurysm. It presents with a high mortality rate due to involvement of visceral branches such as superior mesenteric artery, renal, and medullary branches. The rupture site directly influences the clinical picture and the choice of surgical approach, which can be endovascular or open. The route that has the greatest morbidity and mortality is the open one, since the procedure has an invasive nature, which requires clamping the thoracic aorta, increasing the risk of involvement of the visceral and medullary branches. As a consequence, other complications may occur, such as visceral ischemia and paraplegia.(AQUINO et al, 2017).

AAA_r is a surgical emergency, which can be approached through the open or endovascular approach. It was believed that the only possibility of treatment was the open route, however, since 1990, the endovascular route has been widely used due to its lower rate of perioperative complications, although the mortality rate has remained constant. In cases where the patient is hemodynamically

unstable or with anatomical variations that make access difficult, the open approach is chosen as an option (OLIVEIRA et al, 2018).

COMMENTS

AAA rupture is a surgical emergency with high morbidity and mortality. Clinical diagnosis has low specificity as only about 30% of patients have the classic AAA triad, they are usually asymptomatic or show nonspecific symptoms. These data reinforce the importance of syndromic investigation and acute abdomen conditions. Thus, CT becomes an essential tool for diagnosis, as well as helping to choose the best surgical approach.

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