

CONTINUING MEDICAL EDUCATION ΣΥΝΕΧΙΖΟΜΕΝΗ ΙΑΤΡΙΚΗ ΕΚΠΑΙΔΕΥΣΗ

Vascular Diseases Quiz – Case 16

A 77-year-old male patient, with unremarkable medical history apart from smoking was admitted to the emergency department due to loss of consciousness and painful lower limbs of acute onset. The patient was hemodynamically unstable, with tachycardia and systolic blood pressure of 70 mmHg. Clinical examination revealed a pulsatile abdominal mass with a thrill and a bruit on auscultation, dilatation of bilateral jugular veins and absence of femoral and pedal pulses in the lower limbs. Laboratory investigation revealed a hematocrit (Ht) of 41%, WBC: 17.000/ μ L and platelets (PLT) count of 81.000/ μ L. The patient underwent an emergent computed tomography (CT) scan of the abdomen with the use of intravenous contrast media (figures 1, 2).

Comment

Aortocaval fistula is a rare condition related to 1% of patients being operated for abdominal aortic aneurysm and 4% of those presenting with rupture. The first case of aortocaval fistula in a patient with ruptured abdominal aortic aneurysm was reported by James Syme in 1831. A patient may present with abdominal or back pain, pulsatile abdominal mass, machinery-type bruit in the abdomen, heart failure, dyspnea and pulmonary edema. CT and magnetic resonance imaging (MRI) scan with IV contrast use

or angiography are the examinations of choice for the diagnosis of an aortocaval fistula. CT scan findings include the presence of contrast in the inferior vena cava, coexistence of an abdominal aortic aneurysm and loss of the space between aorta and inferior vena cava. Preoperative diagnosis is significant in order to take care for the great blood loss and to prevent pulmonary embolization from air, atheromatous debris or thrombus. However, only in 34% of cases preoperative diagnosis is possible.

Management of aortocaval fistula is achieved either by suturing the defect through the aneurysmal sac or by using a patch. In case that the defect in the inferior vena cava is large and cannot be repaired, ligation of the inferior vena cava can be performed.

The patient discussed herein underwent emergency exploration through a midline laparotomy. Abdominal aortic aneurysm was incised and an aortocaval fistula 30 mm in diameter was identified through the aneurysm sac. Due to the increased size of the defect,

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Figure 1



Figure 2

the inferior vena cava and common iliac veins bilaterally were ligated. The abdominal aortic aneurysm was repaired with the use of a Dacron aorto-biiliac graft. The patient was discharged on 14th postoperative day with no edema or signs of deep vein thrombosis of the lower limbs.

Color Duplex examination, three months after the operation, revealed ligation of the inferior vena cava and collateral circulation through hemiazygous and pancreatoduodenal veins. External and internal iliac veins were patent and there were no signs of insufficiency or thrombosis in lower limbs veins.

Aortocaval fistula is a condition with great morbidity and mortality. Preoperative diagnosis allows for better planning of the operation reducing surgical morbidity and mortality.

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