SHORT REPORT

Acute Thrombosis of an Abdominal Aortic Aneurysm: A Short Report

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Introduction. Sudden thrombosis of an abdominal aortic aneurysm is a rare condition with a high mortality rate.

Report. We present a patient with acute neurological deficits in both legs based on a thrombosis of a nine centimetre infrarenal abdominal aortic aneurysm. Successful iliac thrombectomy with aortic tube graft reconstruction was performed.

Discussion. Sudden thrombosis of an abdominal aortic aneurysm is a rare condition, but should be taken into consideration in patients with acute neurological deficits of the lower extremities. Prompt diagnosis and surgical management can lead to a successful outcome. A review of the literature is presented.

Keywords: Acute; Abdominal; Thrombosis; Aorta; Aneurysm.

Introduction

Sudden thrombosis of an abdominal aortic aneurysm (AAA) is a rare condition with a high mortality rate. We describe a case of acute thrombosis of the abdominal aorta in a patient who experienced a sudden loss of motor function in both legs. A literature search was performed on the aetiology and therapy of acute thrombosis of the abdominal aorta.

Case Report

A 55-year-old man was presented to our emergency department with a sudden onset of nausea, abdominal and back pain in minutes followed by loss of motor function of both legs. The patient described some complaints of abdominal discomfort and nausea 3 days previously. His medical history revealed a mild hypertension only. The patient did not smoke and used one antihypertensive drug. There were no previous complaints of intermittent claudication. At physical examination of the abdomen a large pulsating mass was present. Both legs were pale and cold with slight mottling of the skin of the lower legs. No femoral or distal leg pulsations were present. In the mean time the patient maintained normotensive with a regular pulse of 95 and with 100% oxygen saturation. The creatinine level on admission was 89 (reference 62–106 μmol/L).

Contrast-enhanced computed tomography showed an occluded, 9-centimetre diameter, infrarenal AAA. The blood supply to the external iliac arteries occurred through collateral blood flow (Fig. 1). The thrombosed aneurysm was located distally to both renal arteries (Fig. 2).

Immediate surgery revealed a large, non-ruptured, completely thrombosed aneurysm (Fig. 3). We performed a thrombectomy of the proximal iliac arteries followed by insertion of a 16 millimetre tube graft that led to return of distal pulsations. No post-operative complications occurred. After recovery from anaesthesia the neurological deficits were completely resolved and the patient sustained a normal diuresis. The creatinine level direct postoperatively was 102 and normalized during the following two days (89 μmol/L). Recovery was uneventful and the patient was discharged at the fifth postoperative day. One year follow-up is uneventful.

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A literature search was performed using Pub Med and the Cochrane Library. Shumacker was the first to report on a thrombosed AAA in 1959.1 Forty-eight cases have been reported so far. Acute neurological deficits played a clinical role in only a few cases.

Discussion

Acute thrombosis of an abdominal aortic aneurysm has a low incidence rate of 0.7–2.8% of all surgically managed AAAs. Mortality rates are described as up to 59% in the limited available literature.2 The high mortality of thrombosed AAAs can attribute to underdetection and therefore underreporting. Several factors appear to be associated with AAA thrombosis.2 Surgical manipulation, trauma, fever, thromboembolic disease, dehydration, hypercoagulability, hypotension, atrial fibrillation, neoplasm, intraplaque haemorrhage, iliac artery occlusive disease, and AAA rupture have been described.2 Late rupture of a thrombosed AAA has been described in patients that underwent axillofemoral bypass.3

In this case the patient had some abdominal complaints with nausea several days before admission that could have led to some level of dehydration. Other factors such as intraplaque haemorrhage and dislodgement of a mural thrombus could also have played a role, but could not be confirmed.

Abdominal pain appears to be an uncommon finding in an acute thrombosed AAA.3 Lower extremity pain (45.7%) and absent distal pulses (68.6%) are the most common clinical signs associated with acute AAA thrombosis.2,4

Acute neurological deficits are a rare primary symptom. In the presented case, paralysis of both legs could have been the result of the anterior spinal artery syndrome secondary to lumbar artery occlusion.5

Thrombectomy followed by aortic reconstruction seems to be the optimal procedure for patients with acute AAA thrombosis. Acute thrombosis of an abdominal aortic aneurysm can present with an acute...
neurological deficit of the lower extremities. Awareness and subsequent prompt diagnosis of an acute AAA thrombosis to prevent prolonged ischemia is essential. Open surgical management can lead to a successful outcome.

References


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