

dominal trauma and accounts for 70% of intramural duodenal hematomas in them. It is also linked to pancreatitis, and can happen spontaneously with the use of anticoagulation or bleeding diathesis, and can be a complication of endoscopic biopsy^[5,8,9].

The patient's age contributed to him being in the lower percentile range for intramural hematomas. Patients with an intraluminal hematoma usually have a good prognosis as they mostly resolve spontaneously with conservative treatment. Nev-

ertheless if the hematoma does not resolve with conservative treatment surgical intervention might be required^[7]. Conservative treatment is the preferred method of treatment for an intramural hematoma. Such treatment could consist of intravenous fluids, nasogastric tube decompression, total parenteral nutrition, symptomatic medication and careful observation^[5,7]. The hematoma could also be evacuated, either surgically or by ultrasound or CT-guided aspiration or endoscopic balloon dilatation or endoscopic incision and drainage

of the hematoma^[10].

Conclusion

An intramural hematoma in the duodenum is a very rare complication most commonly found in children after blunt trauma but the patient in this case report was an adult. He developed an intramural duodenal hematoma as a complication of an ERCP. CT imaging played an important role in the diagnosis and subsequent management of this rare intramural duodenal hematoma.

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peer reviewed CASE REPORT

Case report: Superficial femoral artery aneurysm accompanied by DVT

Vicky Jiba

Clinical Tutor Radiographer, East London Health Complex-Frere Hospital, East London, South Africa

Abstract

This case report describes a middle aged male patient in his early 50s who presented with a swollen left leg and various non-specific clinical signs. Following a range of investigations he was diagnosed with superficial femoral artery pseudo aneurysm (SFAA) and DVT (deep vein thrombosis). His treatment and aetiology of this condition are presented.

Keywords

MDCT, CTA peripheral, HAART, HIV

Case report

A middle aged male was referred from a rural hospital with a differential diagnosis of a left thigh Kaposi sarcoma. On examination he had a hard pulsating mass on the medial aspect of the left thigh and swelling of the whole leg with pitting oedema. He was wasted, afebrile and chronically ill looking. A fine needle aspiration (FNA) of the mass was sent for histology. Blood test and protein studies were done; he was referred for voluntary counselling and

testing (VCT). An urgent ultrasound was requested which demonstrated a large superficial femoral aneurysm (SFA) and DVT (deep vein thrombosis). He then underwent a multi-detector computed tomography (MDCT) angiogram. The volume rendered image with a 3D perspective revealed a large left SFA pseudo-aneurysm (Figure 1). There was no evidence of bone destruction or oedema of the left thigh. There was evidence of collateral vessels which is indicative of a chronic state. An axial image showed a large throm-

bus around the aneurysm (Figure 2). The haematoma around the mass lesion was enhancing and the small round structures originated from the big haematoma (Figure 3). There was evidence of a DVT in the popliteal vein as the veins were occluded as a result of the haematoma (Figure 4).

SFA pseudo aneurysm is a rare type and usually occurs in elderly patients and is also described as a complication of acquired immunodeficiency syndrome (AIDS). The VCT results were positive and the patient had a CD4 count of 6. He was

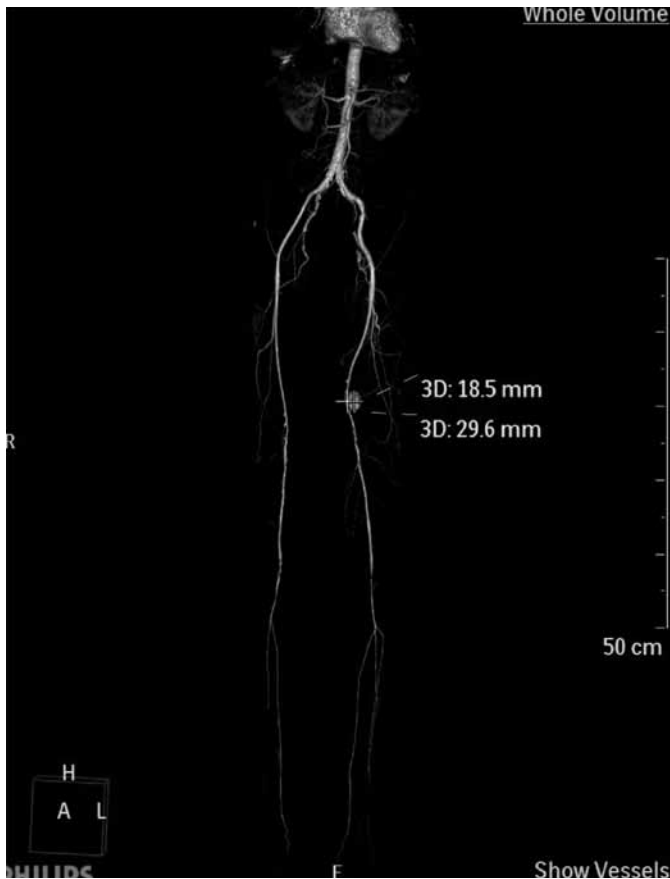


Figure 1: VR image showing large left SFA aneurysm with collaterals.

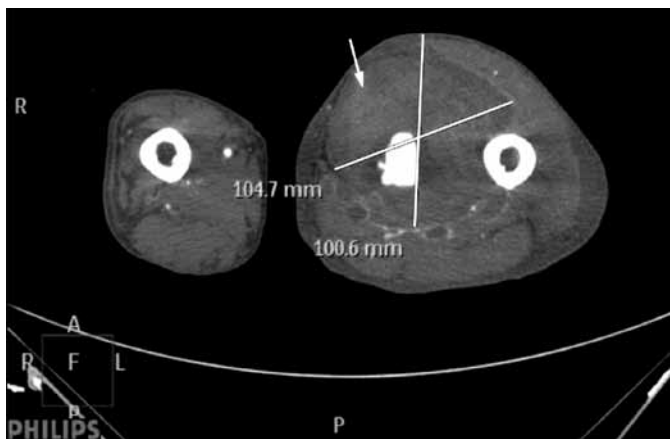


Figure 2: Axial CT of femur showing large haematoma around the SFA aneurysm measuring 105 x 101mm.

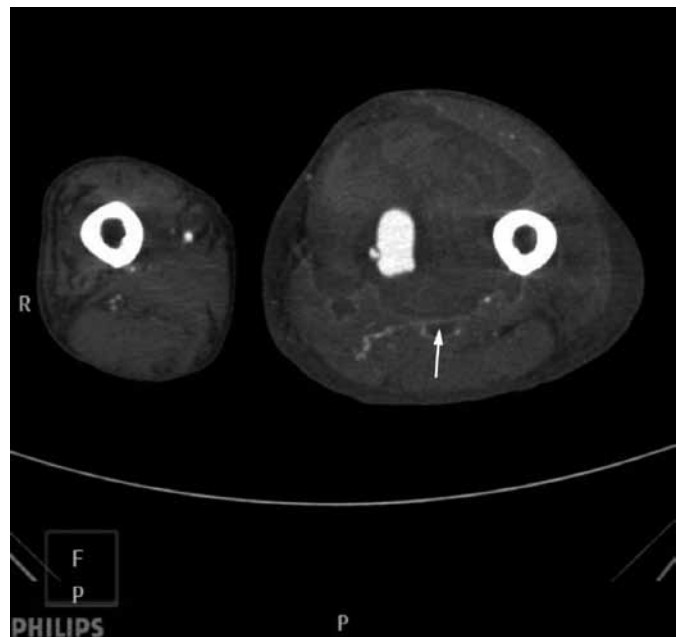


Figure 3: Axial CT of femur showing small ring-enhancing pockets coming from the huge haematoma.

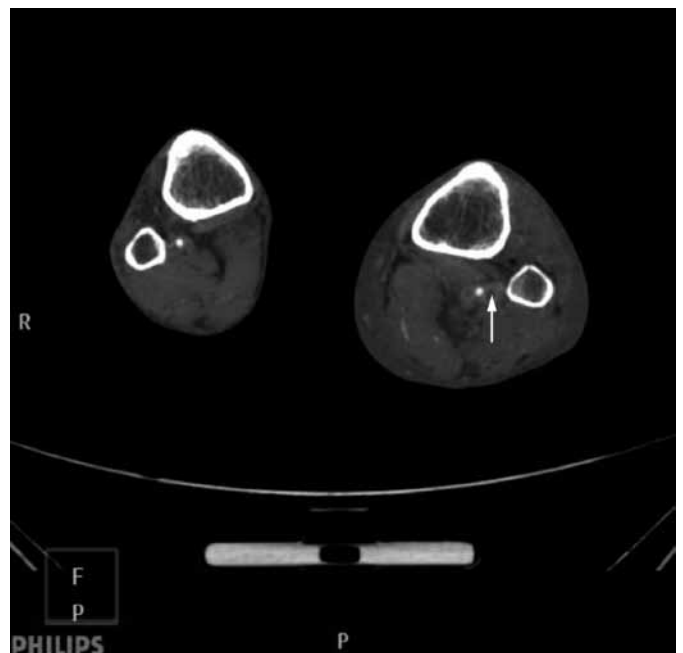


Figure 4: Axial CT of the femur showing total occlusion of left popliteal vein (DVT) due to haematoma above.

then placed on highly active antiretroviral treatment (HAART), treated with anticoagulants and intravenous (IV) antibiotics so that he could be stabilised for surgery. Blood was transfused since the patient was bleeding. At writing of this case report the patient was improving and was prepared for surgery.

Discussion

An aneurysm is a sac formed by localised dilatation of the wall of an artery. It occurs when there is a weakening and various reasons for these are infection (mycotic),

atherosclerosis, trauma, high blood pressure and inheritable diseases^[1]. Aneurysms are named according to their location and are classified as either a true or false aneurysm. The size, location, patient's medical history, smoking habits may influence the growth of the aneurysm^[1,2]. Aneurysms do not cause symptoms until they are large or develop a complication. SFA aneurysms are very rare and usually occur in elderly patients. They are often associated with peripheral / abdominal artery aneurysm and are responsible for 0.5% of peripheral aneurysms^[3]. SFA presents as a mass, of-

ten with a rupture^[3]. It is usually a pseudo aneurysm. A pseudo aneurysm is one in which the entire wall is injured and the blood is contained by the surrounding tissue, with eventual formation of a sac communicating with the artery. There are few case reports published on the SFA disease. It affects the elderly due to degenerative atherosclerosis and also young patients that are HIV positive. Patients with HIV related aneurysm are young and lack the usual risk factors associated with vascular disease. These aneurysms occur at unusual sites like the common carotid and

SFA^[4]. They also have features of false aneurysms. SFA has also been identified as one of HIV associated vasculopathy. HIV has brought array of new clinical presentations since it was described in 1981^[4-7]. Without treatment these atypical aneurysms are usually fatal. The occurrence of this aneurysmal vasculopathy is characteristic of a possible infective or immune complex origin.

When the immune system is sufficiently depleted the patient develops opportunistic infections and is called AIDS. HIV is a chronic disease that is treated with HAART to prolong life expectancy of HIV infected patients^[5]. HIV vasculopathy was first described in 1987 and may present with arterial occlusive disease and aneurysmal disease or spontaneous arteriovenous fistula^[6]. It is more common in males than females although most HIV patients are females and the reason for this is not known. The pathogenesis of the aneurysms is uncertain. Clinical signs are positive bruit, pallor, atrophy, and necrosis. Risk factors include smoking habits, HPT, genetic connective disorder (Marfan syndrome), old age. DVT is a complication of the aneurysm.

DVT is a condition in which a clot forms in a vein, either secondary to phlebitis or due to partial obstruction of the vein^[1]. If the clot is detached it may be swept into pulmonary circulation and produce embolism. The thrombus is more likely to embolize or cause occlusion if there is no inflammation but if there is more inflammation (which is characterised by more pain); the clot will adhere to the wall of the vein. Other complications include venous ulcer and gangrene^[1].

Risk factors include recent surgery, presence of active cancer, lower extremity trauma, recent hospitalisation, recent immobility and presence of an underlying chronic comorbid medical illness. Wells criteria were used to see whether the patient has increased probability of DVT. The severity of HIV infection increases the risk

of DVT^[5]. Anticoagulation therapy is the administration of a medication to delay the clotting time of the blood, to prevent the formation of a thrombus.

Diagnostic assessments include clinical history and physical examination. Chemistry blood tests were also used and protein studies were very high indicating acute on chronic infection. Haemoglobin was also very low. Management of the aneurysm is according to symptoms. The standard therapy involves surgery. Endovascular therapy is the treatment of choice. Patients with full blown AIDS are treated conservatively. The combination of a low CD4 count and low albumin point towards poor operative results of the aneurysm^[6].

In view of the risk of rupture and other complications in SFA aneurysm surgical repair is advised even in an asymptomatic aneurysm. A graft is used to repair the rupture (polytetrafluoroethylene-PTFE prosthesis). This is done by removing the aneurysm and replace it with vein graft^[7].

Conclusion

A MDCT peripheral angiogram is the imaging modality of choice in evaluation of peripheral arterial disease. The advantages of using MDCT are imaging quality and isotropic resolution that permits multiplanar and volume rendering reconstructions and better administration of contrast medium. CT is an accurate and effective diagnostic method for tracking size, configuration and extravasation of blood into the soft tissue of the thigh. Ultrasound is used as a first line diagnostic tool for swelling of the thigh^[8]. The prognosis is very good if SFA pseudo aneurysm is diagnosed early. This is also linked to size, resectability and general condition of patient. Early diagnosis and management of RVD could help limit HIV related vasculopathy and other opportunistic diseases. Surgical removal of the pseudo aneurysm is the treatment of choice because of risk of complications like DVT and rupture.

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