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Thrombosed Persistent Sciatic Artery Complicated With Aneurysm

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Abstract: *Persistent sciatic artery is an extremely rare embryologic anomaly .It is very rarely seen in our practical imaging.it has sex difference.(1) the sciatic artery usually disappears when the superficial femoral artery is correctly formed(2). We describe a case of a persistent sciatic artery with aneurysm formation in which the final diagnosis and complete evaluation of arterial anatomy of the lower extremity were accurately made by computed tomographic (CT).*

Introduction:

The sciatic artery is usually not seen if the femoral artery is the one supplying the lower limb. If the femoral arteries lack to supply lower limb the sciatic artery suppliments lower limb ,The vast majority of persistent sciatic artery are complete (continuing as the popliteal artery) but some are incomplete (3-4).

Case report

A 67 -year-old non-smoker man with no significant medical or surgical history. presented to the emergency room reporting 2 weeks of progressive left leg discomfort, swelling, and tenderness. He also noted leg pain of radicular nature and denied any trauma. On physical examination, there was an abolition of the femoral and popliteal left pulses.

CT angiography was performed from the abdominale aorta to distal lower limbs with a four-slice multidetector CT scanner (Volume Zoom; Siemens, Erlangen, Germany; collimation, 4 mm 2.5 mm; slice thickness, 3 mm; table feed, 15 mm per gantry rotation) after intravenous administration of 125 mL contrast material (Ultravist 370; Schering, Berlin, Germany) at 3 mL/sec. The images showed a voluminous left buttock thrombosed aneurysme from the inferior gluteal artery (Figure:1,2), with the absence of a superificial femorale artery replaced by a thrombosed calcified artery going through the course of the sciatic nerve consistent with a persistent sciatic artery coming from the inferior gluteal artery in both extremities.(Figure 3) The common and profunda femoral arteries were normal.

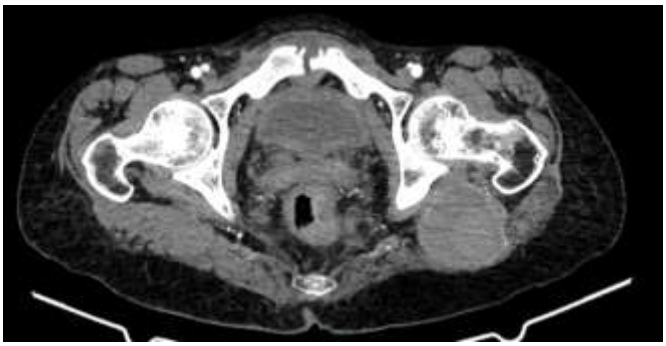

Figure 1 *axial pelvic CT showing a voluminous left butcock aneurysm that is thrombosed.*

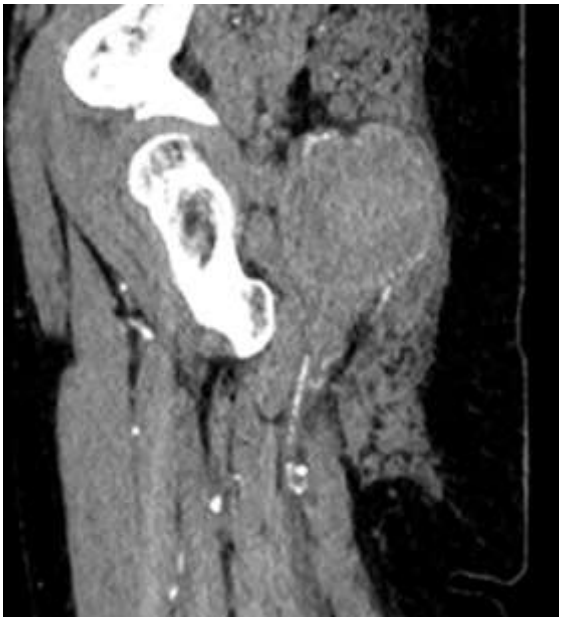

Figure 2 sagittal CT reformat showing the left butlock aneurysm

Figure 3 coronale view of a Reformat CT reconstruction showing a thrombosed left persistent sciatic artery that is calcfiied and a thrombosed right sciatic artery

Discussion

During the embryonic development the sciatic artery is the one providing blood supply the the lower limb. It then starts regressing forming the distal part of the inferior gluteal artery(5). If this process fails the sciatic artery remains the principal artery for the legs. It can fail to regress the it results in hypoplastic sciatic artery but normal femoral system. (6)

Patients with persistent sciatic artery may present with a pulsatile gluteal mass with possible pain, especially in the sitting position(7). Repeated external trauma remains the main cause for higher aneurysm incidence in this population. (7). Other possible causes include accelerated atherosclerosis, hypertension, congenital lack of arterial wall elastic tissue, and infection (8). A completely thrombosed aneurysm may mimic a neoplasm or inflammatory lesions (1).

The diagnosis of persistent sciatic artery is made by conventionnal angiography. In our case, CT angiography demonstrated all anatomic alterations pre- cisely and made it possible to refer the patient to vascular surgery with additional useful data such as the true size of the aneurysm and the relationship of the local vascular structures to the bony landmarks.

Options for vascular reconstruction include interposition graft replacement and standard femoro-popliteal bypass grafting if the common femoral artery is sufficiently developed to provide adequate inflow. As with other peripheral arterial ancurysms resulting in thrombosis and extensive distal arterial embolization and thrombosis, intra-arterial thrombolytic therapy may be useful in selected cases before definitive surgical revascularization.

Conclusion :

The persistent sciatic artery is a rare anomaly with a high incidence of complications including aneurysm formation and ischaemia that may lead to amputation. Strategies for follow-up could not be deduced from the available literature.

A pulsating gluteal mass may be the first sign of persistent sciatic artery. Before any intervention, a complete evaluation of the distal peripheral arterial system must be performed. This can now be accurately achieved with use of CT angiography.

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