

Persistent sciatic artery aneurysm: a rare embryological vascular variant

A 64-year-old woman presented with dry gangrene of the right big toe. Right femoral, popliteal and dorsalis arterial pulses were weak. The rest of the physical examination was normal. Peripheral reconstruction using 64-slice multi-detector computerised tomography and peripheral angiogram through a catheter via right femoral artery showed that the right internal iliac artery continued as persistent sciatic artery (PSA) and then distally as the popliteal and tibial arteries. The PSA was totally occluded from upper thigh level with fusiform aneurysm with thrombus. Right external iliac artery continued as common femoral artery, and then as profunda femoris and superficial femoral artery, which ends at the level of adductor hiatus (figure 1A–D and see online supplementary movie 1).

PSA is a rare congenital anomaly resulting from lack of regression of embryonic axial artery of the developing lower limb bud. It is a continuation of the internal iliac artery, which communicates with the popliteal and tibial arteries distally.¹ Prevalence of PSA has been estimated to be 0.025%–0.04%.² Persistence of this artery can be accompanied by the hypoplastic femoral artery.

Due to its specific anatomic location, PSA is prone to repeated trauma and complications such as aneurysm or distal embolisa-

tion. Arterial insufficiency as a result of thrombosis of the aneurysm or distal embolisation of mural thrombus is a common clinical presentation, and it is associated with a high incidence of limb loss.³

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REFERENCES

- Paraskevas G, Papaziogas B, Gigis J, et al. The persistence of the sciatic artery. *Folia Morphol* 2004;63:515–18.
- van Hooft IM, Zeebregts CJ, van Sterkenburg SM, et al. The persistent sciatic artery. *Eur J VascEndovascSurg* 2009;37:585–91.
- Mandell VS, Jaques PF, Delany DJ, et al. The persistent sciatic artery: clinical, embryologic, and angiographic features. *Am J Roentgenol* 1985;144:245–9.

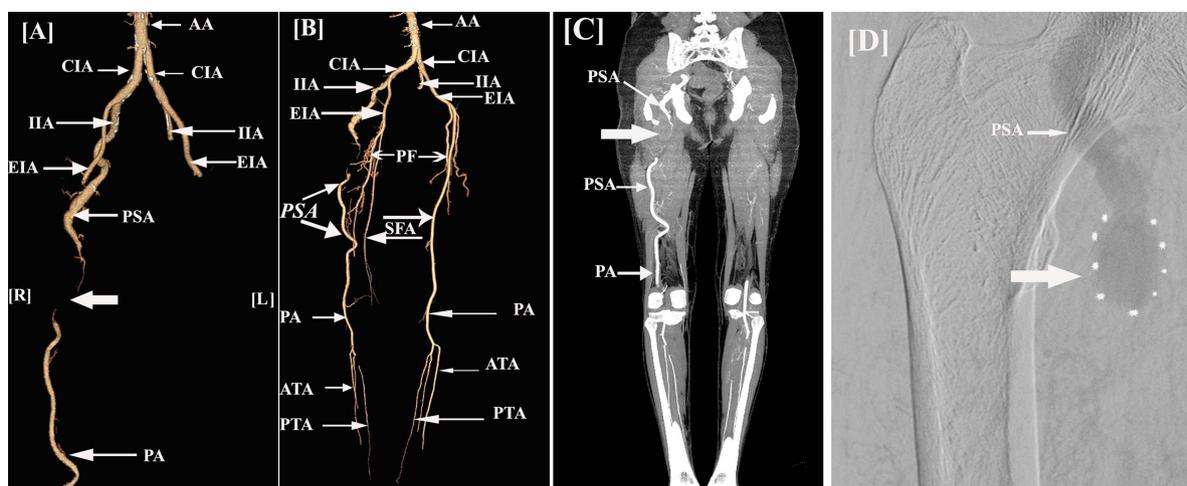


Figure 1 (A) Multi-detector computerised tomography (MDCT) reconstructed peripheral angiogram: Right internal iliac artery continues as PSA. It is totally occluded at upper thigh (arrow), reforms at mid-thigh level and continues distally as popliteal artery. (B) MDCT reconstructed peripheral angiogram-oblique view showing occluded PSA. Right external iliac artery continues as common femoral artery and divides into profunda femoris and superficial femoral artery. (C) MDCT tissue reconstructed image-coronal view showing total occlusion (arrow) of PSA with distal reformation at mid thigh level and continues distally as popliteal artery. (D) Peripheral angiographic image showing total occlusion (arrow) of PSA with fusiform aneurysm (outline marked). AA, abdominal aorta; CIA, common iliac artery; EIA, external iliac artery; IIA, internal iliac artery; PSA, persistent sciatic artery; PF, profunda femoris; SFA, superficial femoral artery; PA, popliteal artery; ATA, anterior tibial artery; PTA, posterior tibial artery.