

## A dusky hand—expect the unexpected

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A 56-year-old Indian national woman with a history of hypertension presented to the emergency department with left forearm pain for 1 week with increasing pain for 2 days. Examination revealed a dusky left hand (Fig. 1) and cool skin distal to the distal half of the left arm. The left brachial and radial pulses were absent, confirmed by bedside Doppler scan. There was a pulsatile 3×4 cm mass in the left supraclavicular fossa (Fig. 2). The diagnosis of left subclavian artery aneurysm (SAA) with acute ischemia of the left upper limb was made. A bedside ultrasound scan (Fig. 3) demonstrated the aneurysm. Computed tomography angiography (Fig. 4) performed later showed the level of

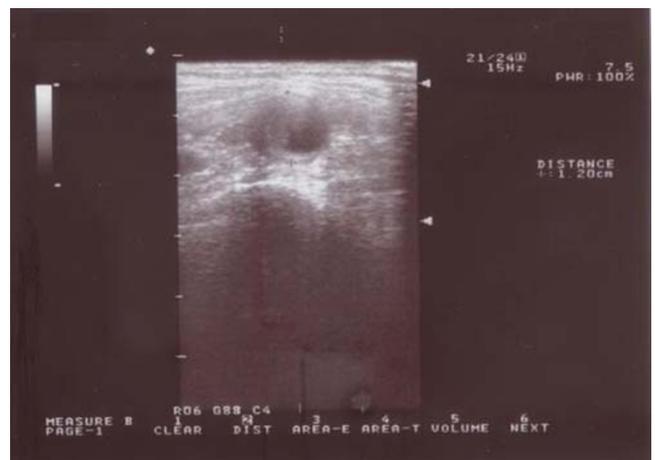


**Fig. 1** The left hand is noticeably dusky compared to the right



**Fig. 2** Fullness of the left supraclavicular fossa

occlusion. She was discharged against medical advice for surgical treatment in India in view of costs involved locally. She received intravenous heparin overnight and was discharged on subcutaneous enoxaparin.



**Fig. 3** Left subclavian artery dilatation of 1.2 cm suggestive of an aneurysm with intraluminal thrombus

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**Fig. 4** Three-dimensional reconstruction showing occlusion of the left axillary artery at the level of the surgical neck of the humerus. No filling of the distal axillary artery

The etiologies of SAA include atherosclerosis, trauma, thoracic outlet syndrome (e.g., cervical rib), and mycotic aneurysm from drug injection [1]. Locally, especially in the younger population, the inadvertent intra-arterial injection

of illicit drugs such as pounded and diluted buprenorphine and midazolam should be suspected as a cause of the aneurysm. SAA may be present in association with other conditions such as coarctation of the aorta, Takayasu arteritis, and Ehlers-Danlos syndrome [2]. The most common complication is peripheral thromboembolism where patients may present with severe ischemic symptoms of the upper extremity, gangrene, and even hemiplegia. Hand ischemia is frequently misdiagnosed as vasospasm [3]. Other complications include rupture of the aneurysm and compression of the subclavian vein and brachial plexus.

## References

1. Davidović LB, Marković DM, Pejkić SD, Kovacević NS, Colić MM, Dorić PM (2003) Subclavian artery aneurysms. *Asian J Surg* 26(1):7–11; discussion 12
2. Pairolo PC, Walls JT, Payne WS, Hollier LH, Fairbairn JF 2nd (1981) Subclavian-axillary artery aneurysms. *Surgery* 90(4):757–763
3. Nehler MR, Taylor LM Jr, Moneta GL, Porter JM (1997) Upper extremity ischemia from subclavian artery aneurysm caused by bony abnormalities of the thoracic outlet. *Arch Surg* 132(5):527–532