Delayed Presentations of False Aneurysms of the Subclavian Artery

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Abstract Delayed presentation of a false aneurysm following blunt trauma is rare with only five cases discussed in literature. We describe two cases of late false aneurysms of the Subclavian artery following blunt injury.

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containing thrombus which was arising from a branch of the adjacent subclavian artery (Fig. 1) and the aneurysm was successfully treated by embolisation using coils placed through a microcatheter via a trans-femoral approach (Fig. 2).

**Case 2**

A 57-year-old woman presented with a one-month history of a lump in her left supraclavicular fossa. The patient was otherwise asymptomatic. The patient had fallen off a horse several years ago injuring her shoulder. There was no associated bony injury. She did not have any other significant past medical history.

Clinical examination revealed a 2 x 3 cm smooth pulsatile mass in the left supraclavicular fossa. An ultrasound scan confirmed a false aneurysm of the costocervical branch of the subclavian artery. Using the trans-femoral approach, the costocervical trunk of the left subclavian artery was selectively catheterised and embolised using coils (Figs. 3 and 4).

**Discussion**

Subclavian artery injuries account for only 2% of acute vascular injuries. Major trauma centres report only about two to four injuries per year. Hence most vascular surgeons have limited expertise in their management. The overwhelming majority of these injuries are from penetrating trauma. A minority of these, 1–5% of all subclavian artery injuries result from blunt trauma and are usually associated with fractures or dislocations. A past history of trauma with or without bony injury should raise the index of suspicion. In our cases, there was a positive history of trauma around the aneurysm site in both of these patients leading to the diagnosis of traumatic pseudoaneurysm. A careful history and clinical examination followed by an ultrasound scan will confirm the diagnosis. Percutaneous endovascular treatment with stents and coils is a good alternative to conventional surgery. In fact, physical examination is the best initial diagnostic method in the evaluation of subclavian artery trauma. Angiography to delineate the aneurysm will help plan treatment. The anatomical position of these aneurysms poses a technical challenge in dealing with them by conventional surgery. In fact, physical examination is the best initial diagnostic method in the evaluation of subclavian artery trauma. Angiography to delineate the aneurysm will help plan treatment. The anatomical position of these aneurysms poses a technical challenge in dealing with them by conventional surgery. Various therapy options are conservative observations, open surgical repair and endovascular treatment. In our cases, conservative strategy had high risk due to size of the aneurysm and increase in size. Open operation may be performed using the supraclavicular approach combined with a thoracotomy, with risks of severe bleeding and reoperation for graft thrombosis. Embolisation of the aneurysm using coils under radiological guidance is the treatment of choice.

**Figure 1** MRI showing false aneurysm of subclavian artery (pre embolisation).

**Figure 2** Digital subtraction angiography showing post embolisation phase.
Conflict of Interest

None.

References
