‘Spontaneous graft pseudoaneurysm presenting a decade after carotid-subclavian bypass’: an extremely rare complication detected on CT

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DESCRIPTION
A 61-year-old man who had undergone a right carotid-subclavian bypass with saphenous vein homograft for symptomatic right ostio-proximal subclavian artery (SCA) occlusion 10 years ago, presented with gradually progressive pulsatile swelling in the right lower neck. Ultrasonography revealed a pseudoaneurysm, the exact origin of which could not be defined. CT angiography (CTA), done for better delineation of the anatomy, revealed lobulated fusiform partially thrombosed pseudoaneurysm, measuring 3.5 × 4 cm, arising from the bypass graft connecting the right common carotid artery (CCA) and the right SCA. The aneurysm (thrombosed portion) was causing significant extrinsic compression of right internal jugular vein and the right CCA. In addition, there was significant stenosis of the graft distal to the aneurysm as well as the right SCA distal to the anastomosis (Figure 1). However, the run off distal to the SCA was good. There was no history of trauma or any infection and there was no manifest pain in the right arm.

Revascularisation by arterial transposition or bypass is considered the treatment of choice in symptomatic subclavian occlusive disease. The various late complications described after carotid subclavian bypass graft include graft infection, thrombosis and occlusion.1 The occurrence of graft pseudoaneurysm as a complication after bypass is extremely rare. A recent case series described late anastomotic pseudoaneurysm in two patients who underwent bypass in the setting of thoracic endovascular aortic repair, occurring at proximal and distal anastomotic sites, at 1 and 35 months, respectively.2 To the best of our knowledge, detection of a spontaneous pseudoaneurysm a decade after surgery has not been reported. The postulated mechanisms could be an unnoticed trauma or a subclinical infection. Graft pseudoaneurysm can be managed by open repair or endovascular placement of stent on case to case basis. Since there was no arm claudication, our patient refused open repair and is currently on regular follow-up.

Figure 1 Volume rendered image (A) demonstrates a lobulated fusiform pseudoaneurysm (black asterisk) of the right carotid-subclavian bypass graft with significant stenosis of the graft distal to it (white block arrow). White surgical clips are seen adjacent to the graft in (A), near its distal anastomosis. There is occlusion of the ostio proximal right subclavian artery (ocluded segment denoted by white asterisks) with reformation of a short segment which gives rise to the right vertebral artery (VA). Maximum intensity projection (B) image reveals the pseudoaneurysm (black asterisk) with peripheral thrombus (thick yellow arrowheads) causing significant extrinsic compression of the right internal jugular vein (IJV) and the right common carotid artery (CCA). IA, innominate artery; SCA, subclavian artery.

REFERENCES