

An iatrogenic dissection of the right subclavian artery

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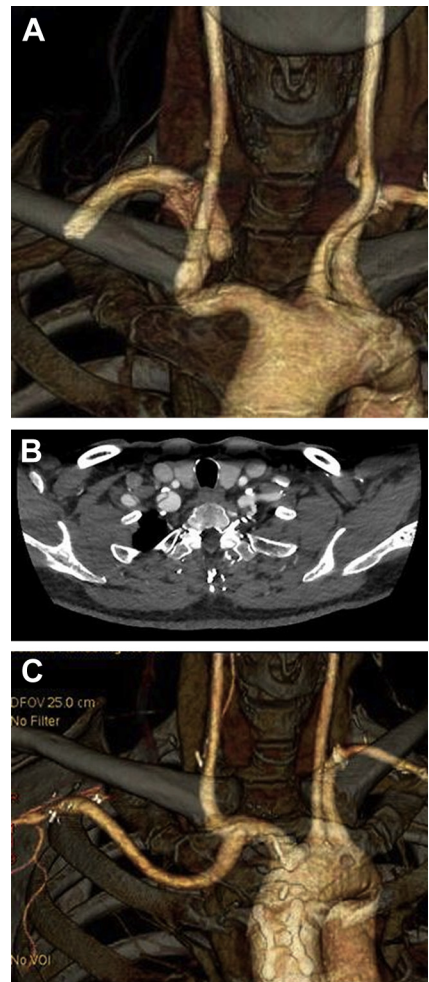
A 56-year-old man was referred to our hospital due to a dissected subclavian artery. A few months earlier, he had undergone a percutaneous coronary intervention for right coronary stenosis via the right radial artery at another hospital. That night, he complained of numbness of the right upper extremity. Arterial angiography showed that the right brachial artery was occluded. Therefore, an emergency percutaneous angioplasty was performed via the right femoral artery. During the procedure, the patient felt mild pain in the right clavicular region. The intervention was successfully performed, but postprocedural computed tomography revealed right subclavian artery dissection with aneurysmal formation (A and B). The blood flow to upper extremity was preserved.

On the basis of a history of an occluded brachial artery possibly associated with dissection and its aneurysmal formation, we decided to perform a surgical intervention. Before the decision was made, we consulted a neurosurgeon about the possibility of a stent implantation because the dissection was very close to the right common carotid artery and was likely to occlude it when a stent was placed. Because the neurosurgeon recommended an open surgical intervention, we performed a bypass from brachiocephalic artery to the right axillary artery using an 8-mm prosthesis.

Postoperative computed tomography showed good patency of the prosthesis and confirmation of blood flow to the upper extremity (C). The patient's postoperative course was uneventful. The patient consented to publication.

DISCUSSION

Iatrogenic dissection of subclavian artery during catheterization was first described in 1994.¹ Only a few cases have been reported since then.² Owing to its rarity, there is no established management for subclavian artery dissection. Conservative management with dual-antiplatelet therapy could lead to good outcome^{1,2}; meanwhile, other literature reported successful stent placement.³ In our patient, we initially considered possibility of a stent implantation for the dissected subclavian artery, but the dissected lesion was very close to the right common carotid artery, which could cause its obstruction or stenosis, as suggested by the neurosurgeon. We therefore selected a surgical reconstruction of the dissected lesion.



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REFERENCES

1. Frohwein S, Ververis JJ, Marshall JJ. Subclavian artery dissection during diagnostic cardiac catheterization: the role of conservative management. *Cathet Cardiovasc Diagn* 1995;34:313-7.
2. Lopez-Palop R, Carrillo P, Frutos A, Cordero A. Conservative management of iatrogenic subclavian artery dissection during a percutaneous coronary interventional procedure. *Rev Esp Cardiol* 2011;64:833-4.
3. Spies C, Fergusson D. Treatment of an iatrogenic subclavian artery dissection. *Catheter Cardiovasc Interv* 2010;76:35-8.

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