

Repair of Thoracic Aortic Aneurysm with Right Aberrant Subclavian Artery and Anomalous Origin of Left Subclavian Artery

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Introduction

Aberrant subclavian artery (ASCA) is a rare congenital anomaly of the aortic arch, in 0.7 - 2.0% of the population.

The anomalous origin of the subclavian artery (AOSCA) is an extremely rare anomaly that only a few cases have been previously reported.

Case

19 years old, Female

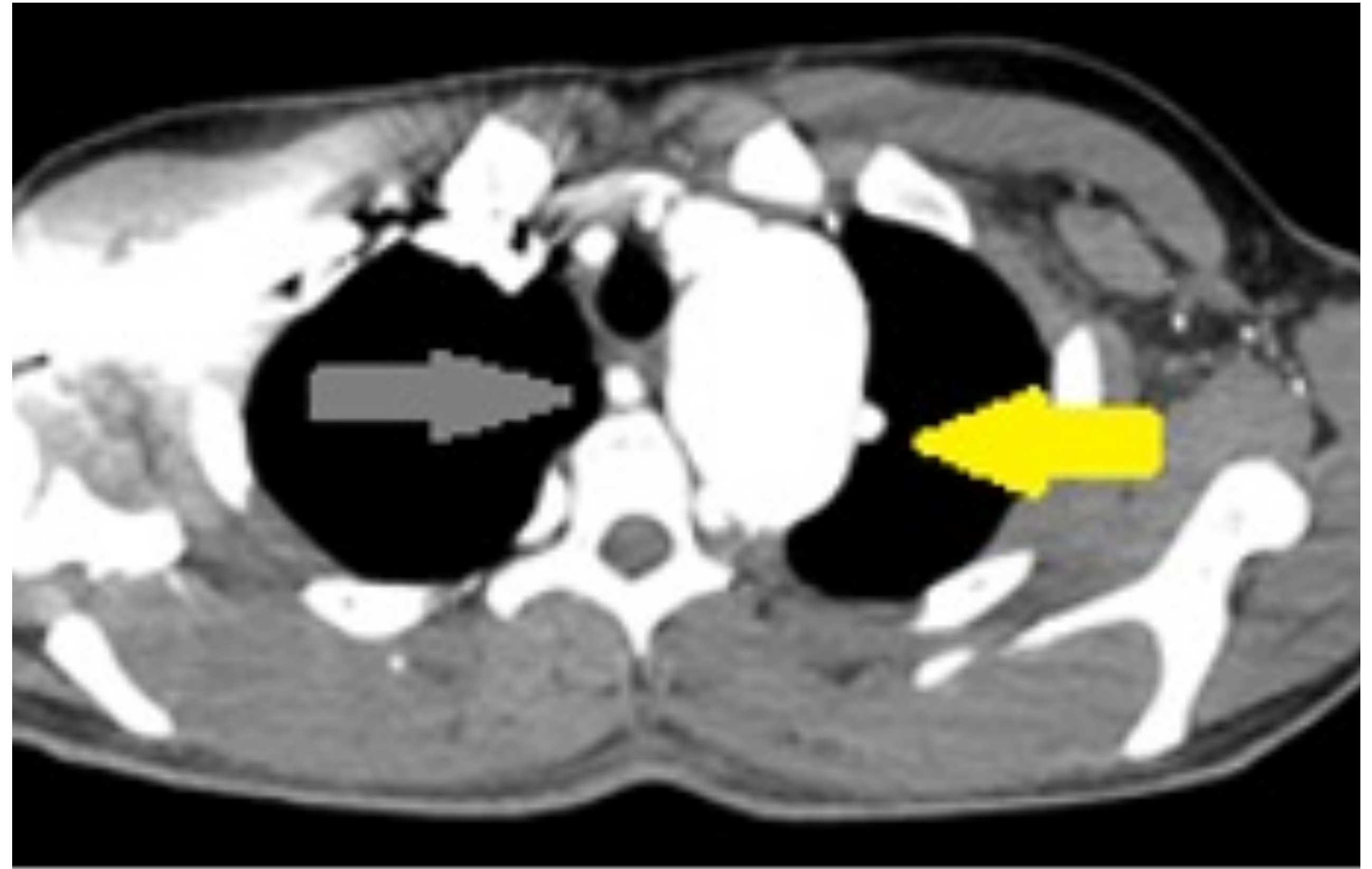
- No past medical history
- Episodic chest and back pain

Case Report

This report details the successful surgical repair of an exceptionally uncommon case: a descending thoracic aortic aneurysm coinciding with a ARSA and an AOLSA, accompanied by a Kommerell's diverticulum.

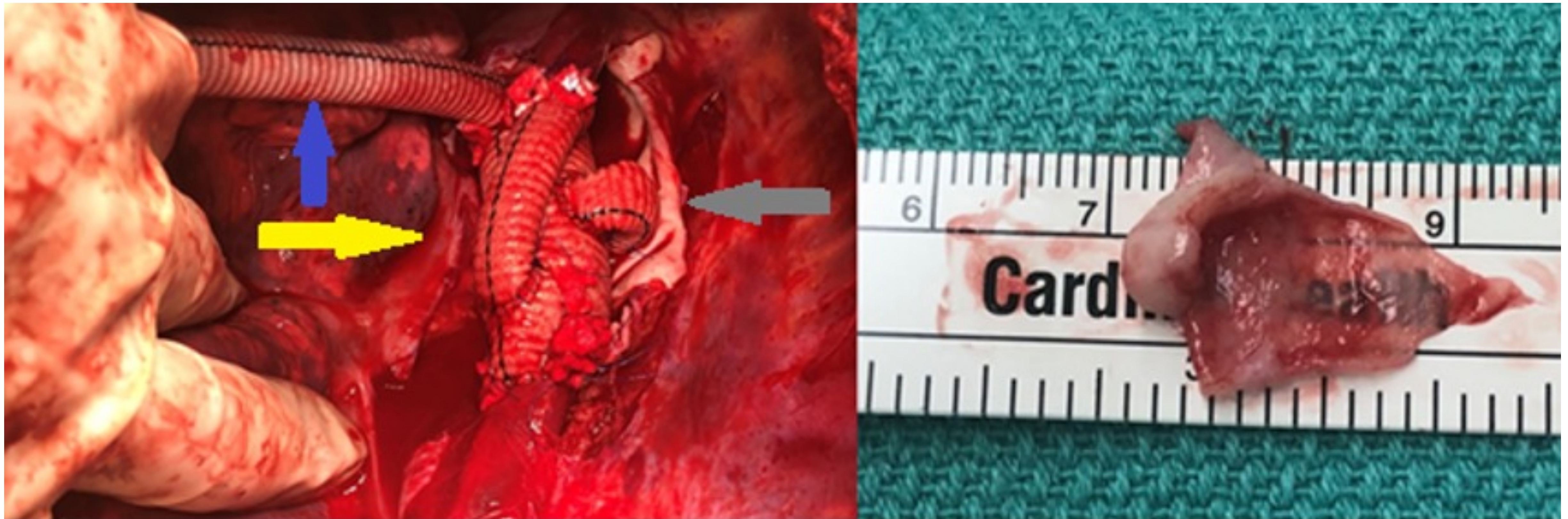
Preoperative revealed
right ASCA (→) and **left AOSCA** (→)

Proximal descending aorta (**41 mm**)



Descending thoracic aortic repair under circulatory arrest

In situ reconstruction of right RSCA (➡) and left AOSCA (➡)



Histopathological analysis

Aortic tissue has focal fibrocellular intimal thickening, **dense adventitial fibrosis, and severe near-complete loss of medial elastic fibers on elastic stain**, consistent with Kommerell's diverticulum

Postoperative course

- Complicated with Chylothorax, resolved with low-fat diet
- Discharged to home at POD 14

Conclusions

We presented a case of an extremely rare anatomical configuration comprised of a right ASCA in left aortic arch, in the presence of Kommerell's diverticulum, a left AOSA and a descending thoracic aortic aneurysm.

Open aneurysm repair with in-situ reconstruction of subclavian arteries was satisfactory.