occluded artery of the lusoria

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“Lost Branch”: How We Solved the Challenge of an Aberrant Right Subclavian Artery During TEVAR

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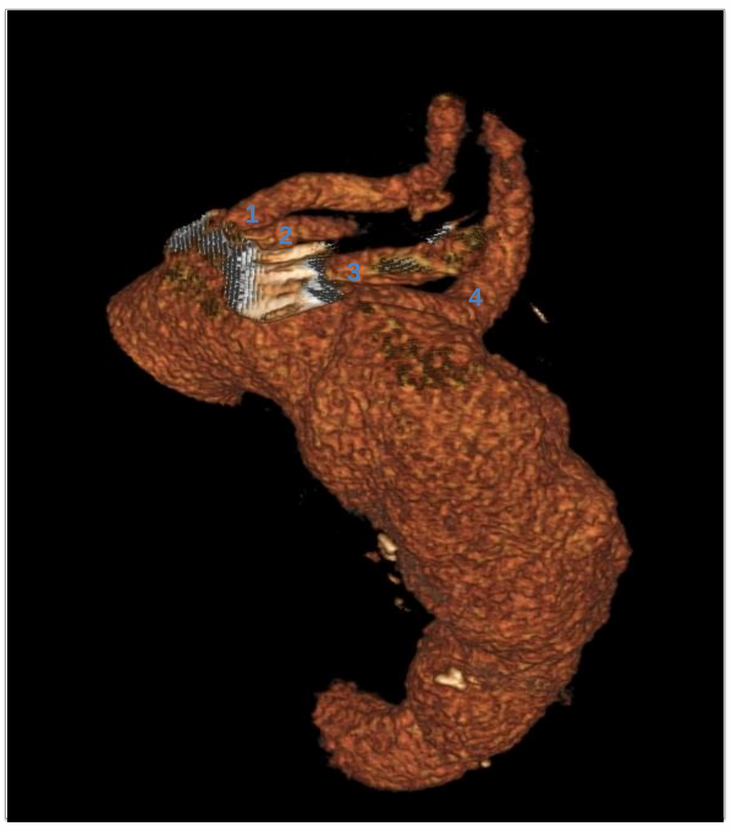
INTRODUCTION

Acute aortic dissection of the descending thoracic aorta (DeBakey IIIa) is a life-threatening condition increasingly managed with thoracic endovascular aortic repair (TEVAR). In some cases, adequate exclusion of the false lumen requires intentional coverage of major aortic branches, posing technical and clinical challenges.

AIM

To present a clinical case of successful TEVAR for DeBakey IIIa aortic dissection with intentional coverage of the right subclavian artery and to demonstrate the feasibility of this approach in the presence of sufficient collateral circulation.

KT- angiography



1- a.carotis communis dextra; 2- a.carotis communis sinistra; 3- a.subclavia sinistra; 4- a.Lusoria

Angiography

1- a.carotis communis dextra ; 2- a. carotis communis sinistra; 3- a.subclavia sinistra; -- a.lusoria

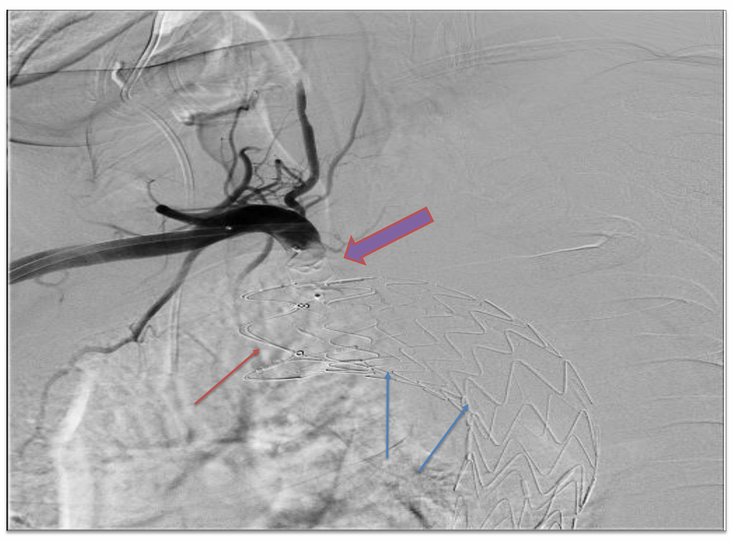
METHODS

A 62-year-old man with long-standing arterial hypertension (stage III, risk 4) was admitted with severe chest pain radiating to the back, dyspnea, and weakness. CT angiography revealed an acute descending thoracic aortic dissection (DeBakey IIIa) extending to the aortic arch, with partial false lumen thrombosis, occlusion of the right subclavian artery, and left-sided hemothorax.
After multidisciplinary evaluation, thoracic endovascular aortic repair (TEVAR) was performed via right femoral access. A thoracic stent-graft was deployed to seal the entry tear, with intentional coverage of the right subclavian artery to achieve complete false lumen exclusion. The procedure was carried out under local anesthesia with angiographic guidance.

Stage of stent-graft implantation

1- a.carotis communis dextra; 2- a.carotis communis sinistra; 3- a.subclavia sinistra; 4- stent-graft; 5- diagnostic catheter «PigTaile»

Stage of occlusion of the lusoria artery



occluded a.lusoria

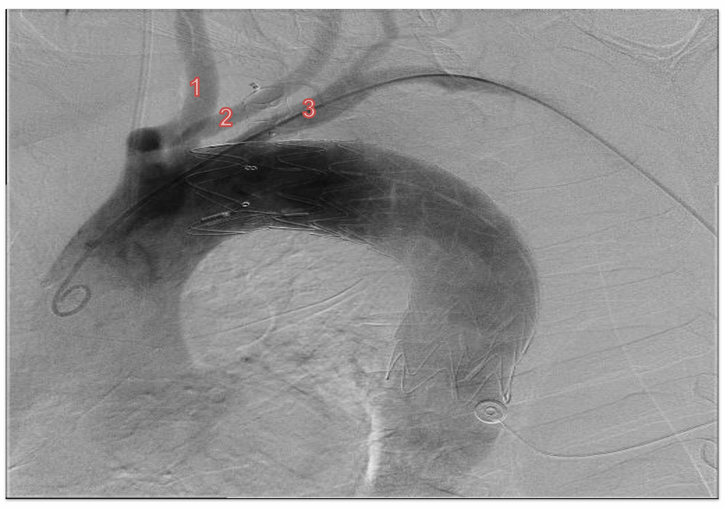
Carona of stent-graft

Stent-graft stratus

RESULTS

The postoperative course was uneventful.
Follow-up CT angiography on day 5 demonstrated proper stent-graft position, complete thrombosis of the false lumen, and absence of endoleak or migration. Collateral circulation provided adequate perfusion of the right upper extremity despite subclavian occlusion. Blood pressure was stabilized at 130/80 mm Hg with medical therapy, and hemoglobin increased to 110 g/L. The patient was discharged on **day 12** in satisfactory condition with recommendations for lifelong antihypertensive and antiplatelet therapy, and CT surveillance every 6 months.

Control angiography



1- a.carotis communis dextra; 2- a.carotis communis sinistra; 3- a.subclavia sinistra;

CONCLUSIONS

Endovascular repair (TEVAR) is an effective and minimally invasive method for managing **De BakeyIIIa aortic dissection**, even in cases complicated by subclavian artery occlusion.
This case highlights the importance of timely imaging, individualized planning, and meticulous postoperative blood-pressure control to ensure durable results and prevent late complications

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