Eur J Vasc Endovasc Surg (2019) 58, 600–601

Jugaad

Aortic Arch False Lumen Embolisation in a Residual Chronic Type A Aortic Dissection

Quentin Pellenc [a,b,*], **Yves Castier** [a,b]

[a] Vascular Surgery Department, Bichat Hospital, Assistance Publique–Hopitaux de Paris (AP-HP), Paris, France
[b] Paris-Diderot University, Paris, France

INTRODUCTION

After open repair of acute type A dissection, aneurysmal degeneration of the thoracic aorta occurs in 40% of patients. Open repair remains the recommended treatment, but endovascular repair such as branched stent grafts, hybrid repair, and false lumen (FL) embolisation can

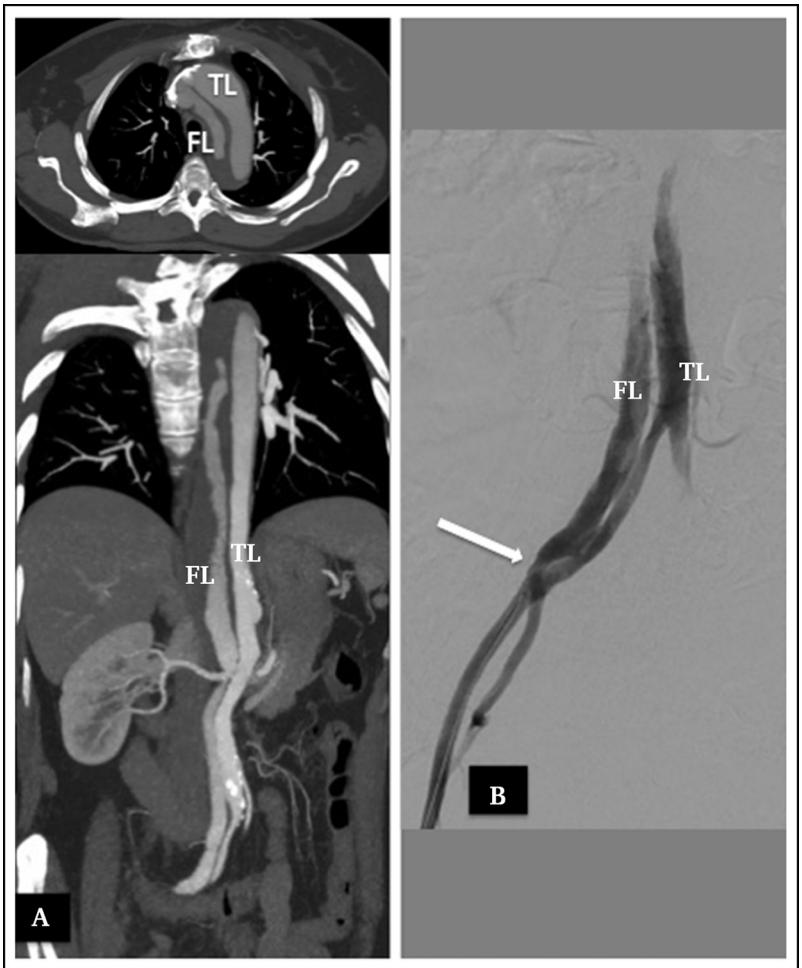

Figure 1. Pre-operative computed tomography angiography with aortic arch dilatation and a partially thrombosed false lumen along the aortic arch and thoraco-abdominal aorta (A). Angiography showing distal re-entry tear for catheterisation (B, white arrow). TL = true lumen; FL = false lumen.

* Corresponding author. Service de Chirurgie Vasculaire, Thoracique et Transplantation Pulmonaire, Hôpital Bichat, 46 rue Henri Huchard, 75877 Paris Cedex 18, France.
E-mail address: quentin.pellenc@aphp.fr (Quentin Pellenc).

https://doi.org/10.1016/j.ejvs.2019.05.024

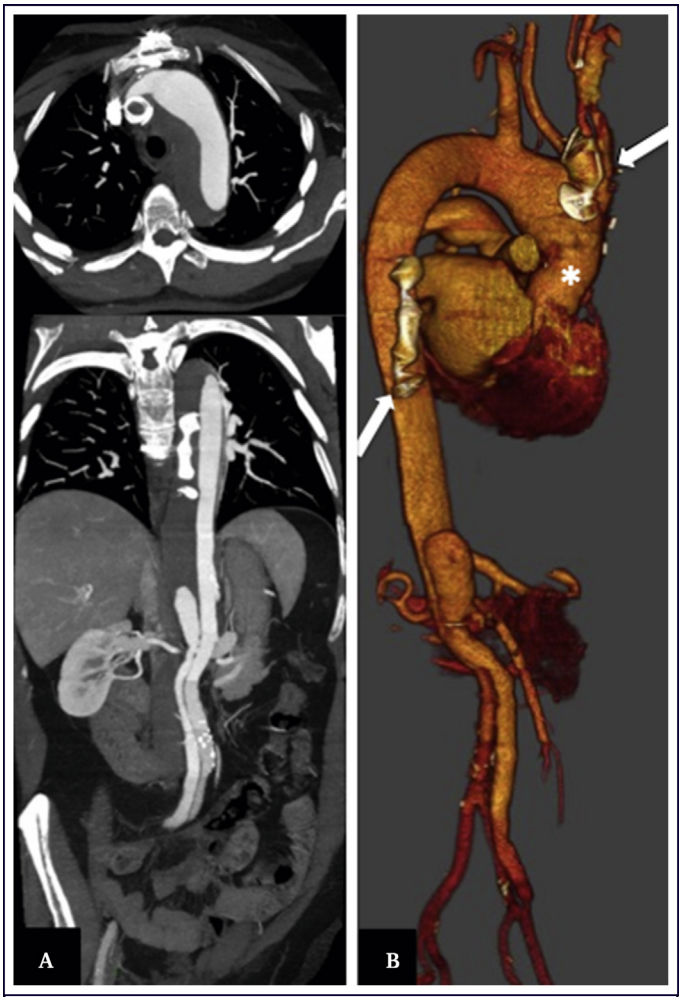

Figure 2. Post-operative computed tomography scan with complete thrombosis of the thoracic false lumen. Axial and coronal views (A). Volume rendering technique view (B). Proximal vascular plug (downward pointing white arrow). Distal vascular plug (upward pointing white arrow). Supracoronary graft (white *).

be considered. FL thrombosis appears to be a favourable prognostic factor and decreases aortic related mortality. Targeted FL embolisation increases aortic remodelling in chronic aortic dissection, and can be achieved with many devices such as coils, iliac occluders, or custom made stent grafts. Stent grafting of entry tears is also described but could not be applied in the present case because of their location. This study describes a percutaneous technique to achieve aortic arch FL occlusion in a 64 year old woman with 57 mm aortic arch aneurysmal degeneration (Fig. 1A), three years after supracoronary graft replacement (initial diameter 41 mm). The presence of only two thoracic entry tears, and the small diameter of the patent part of the FL, allowed FL closure and promotion of aortic remodelling.

TECHNIQUE

The secondary entry tears were observed at the end of the innominate artery (IA), at the level of the right renal artery, and both iliac arteries. Only one intercostal artery arose from the FL (level T7). Under local anaesthesia, the right iliac re-entry tear was catheterised from a transfemoral approach (Fig. 2B) allowing FL guide wire placement up to the IA. Angiography confirmed the FL flow between the IA and the distal descending aorta. The intercostal artery was embolised with two 8 × 10 mm Interlock microcoils (Boston Scientific, Natick, MA, USA). A 22 mm type 2 Amplatzer Vascular Plug (AVP) (Abbott Vascular, Santa Clara, CA, USA) was landed in the FL close to an entry tear. Distal occlusion was performed by delivering an 18 mm AVP in the mid thoracic aortic FL. The six month follow up computed tomography scan showed complete thoracic FL thrombosis (Fig. 2) and the main aortic diameter had decreased to 53 mm.

CONCLUSION

In cases with particular anatomy such as the present patient, plug embolisation of the FL can be performed in residual chronic type A aortic dissection and could be considered to treat aneurysmal degeneration.