



Letter to the Editor

Large compressive proximal pseudoaneurysm after ascending-to-descending aortic bypass in a 62 year-old patient with severe aortic coarctation: First reported case



Sofiene Rezik^{a,*}, Laurent Jacq^a, François Bourlon^b, François Bernasconi^a, Jan M. Quaegebeur^c, Gilles Dreyfus^b

^a Cardiology Department, Antibes Hospital Center, France

^b Cardiothoracic Center, Monaco, Monaco

^c Division of Cardiothoracic Surgery, Columbia University College of Physicians and Surgeons, NY, USA

ARTICLE INFO

Article history:

Received 25 December 2013

Received in revised form 30 December 2013

Accepted 1 January 2014

Available online 22 January 2014

Keywords:

Aortic coarctation

Ascending-to-descending aortic bypass

Pseudoaneurysm

Aortic coarctation is a congenital cardiovascular malformation that is usually diagnosed and corrected during childhood [1]. Prognosis of the unrepaired forms is unfavorable as approximately 90% of cases die before 50 years of age because of heart failure, coronary artery disease, aortic rupture/dissection, infective endarteritis/endocarditis, or cerebral hemorrhage [2]. Management strategies in older patients may prove challenging with uncertain outcomes. We report an unprecedented case of a 62 year-old man referred for a severe symptomatic aortic coarctation; he underwent an ascending-to-descending aortic bypass with an excellent immediate result and uneventful postoperative course. He presented 1 month later an acute heart failure consecutive to a large compressive pseudoaneurysm at the proximal anastomosis of the bypass treated successfully by an emergent complex redo-surgery.

A 62 year-old man with a long history of hypertension consecutive to a poorly-followed aortic coarctation was referred to our department for recurrent hypertensive pulmonary edema.

Control CT scan showed a critical stenosis just after the take-off of the subclavian artery (Fig. 1a) with large ascending to descending collaterals and largely developed intercostal arteries (Fig. 1b).

He was referred for cardiac surgery. Given the significant hemorrhagic risk consecutive to the large collaterals, an ascending-to-descending aortic bypass was the chosen surgical approach.

Immediate postoperative course was uneventful. Control MRI with 3D reconstruction showed a widely patent bypass with nonsignificant residual gradients and good quality anastomoses (Fig. 2a and b).

Thirty days after surgery, during cardiac rehabilitation, our patient presented an acute heart failure requiring its readmission in our department; transthoracic echocardiography found a mildly depressed left ventricular ejection fraction (40%) with elevated filling pressures and some extrinsic compression of the right atrium. Control CT scan with 3D reconstruction revealed a large (10 × 6.2 × 5 cm) polylobular collection constituting a pseudoaneurysm at the proximal anastomosis of the bypass and developing between the tube and a partially compressed right atrium (Fig. 3a, b, c and d).

The patient was urgently referred for redo cardiac surgery; re-intervention consisted in a reconstruction of the ascending aorta with a Bentall procedure, aortic valve replacement, resection of the pseudoaneurysm and reimplantation of the proximal anastomosis of the bypass on the Bentall tube.

Postoperative course was uneventful; control cardiac CT (Fig. 4a) with 3D reconstruction (Fig. 4b and c) confirmed the good quality of the aortic reconstruction.

On the latest clinical follow-up, 3 months after surgery, our patient was asymptomatic with well-controlled blood pressure.

Aortic coarctation is the fifth most common congenital heart defect, accounting for 6–8% of live births with congenital heart disease, with an estimated incidence of 1 in 2500 births [3].

Coarctation should be corrected early in life; indeed; without correction, the mean life expectancy of patients with aortic coarctation is 35 years and 90% of those patients die before reaching the age of 50. Systemic hypertension, accelerated coronary heart disease, stroke, aortic dissection, and congestive heart failure are common complications in patients who have not had surgery or who are operated on in later childhood or early adult life.

In our patient, coarctation has been diagnosed 4 years prior to the current episode; but he was lost to follow-up during the three following years; then he presented recurrent episodes of hypertensive pulmonary edema mandating a prompt and delicate treatment.

Management strategies in older patients with unrepaired aortic coarctation may prove challenging and controversial, even though surgery has generally been considered as the cornerstone therapy. Indeed, a classical direct approach to coarctation repair may face significant

* Corresponding author at: Antibes Hospital Center, 107 Route de Nice, 06600 Antibes, France. Tel.: +33 629246164.

E-mail address: sofienerrek@yahoo.fr (S. Rezik).

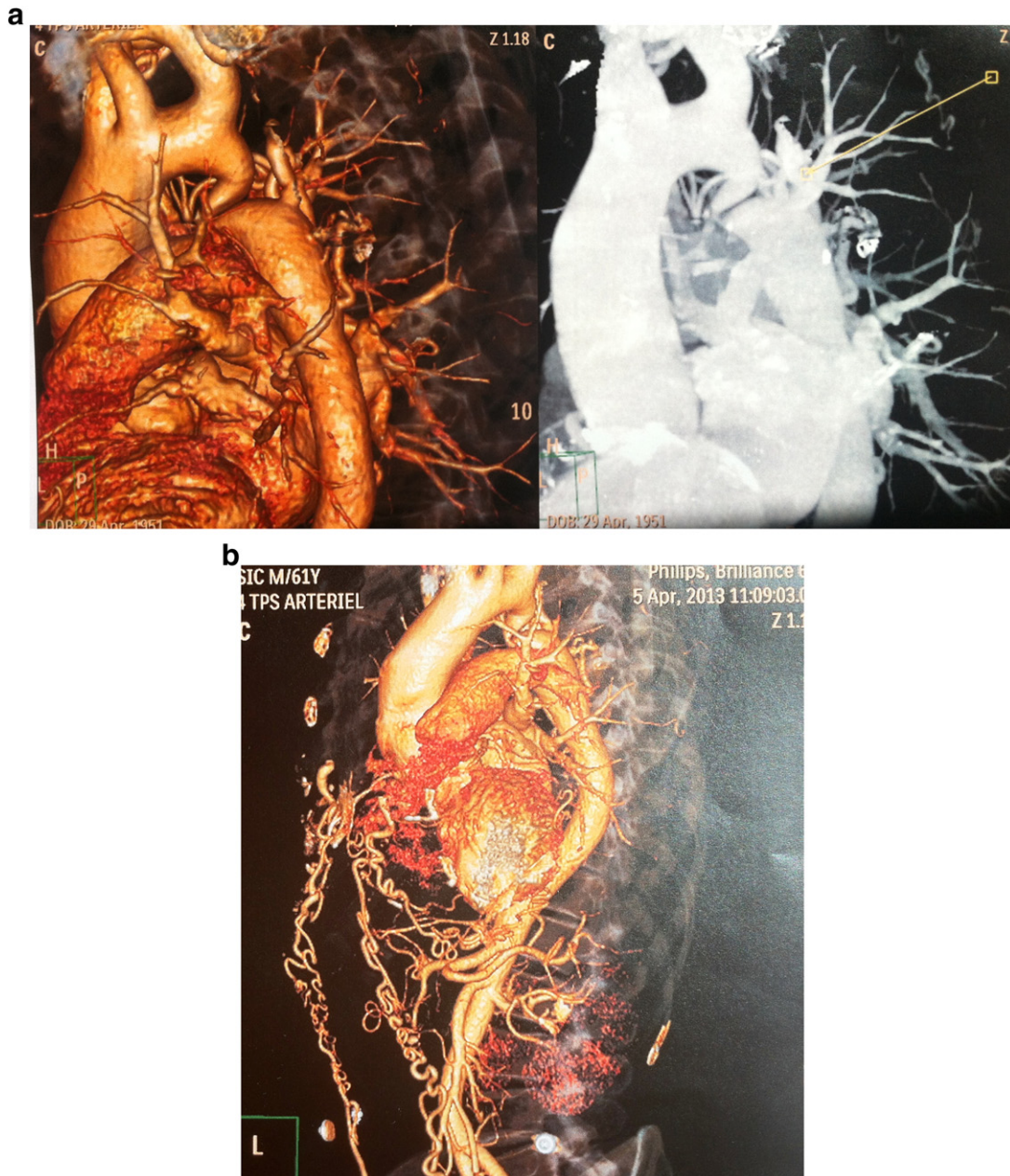


Fig. 1. a: CT scan with 3D reconstruction (right image) showing a very severe aortic coarctation with a critical stenosis (yellow arrow) just after the take-off of the subclavian artery. b: large ascending to descending collaterals and largely developed intercostals arteries.

obstacles in the adult population as large collaterals development and lung failure after thoracotomy may present technical challenges while total aortic cross-clamping, with diminished collaterals, has been involved as a causal factor in paraplegia [4]. Likewise; severity of aortic constriction in adults with inherent risk of aortic rupture, usually, renders those patients bad candidates to transcatheter interventions in the primary setting.

For these reasons, extra-anatomic bypass grafting has been used as an alternative surgical option. This technique reduces complications associated with extensive mobilization of the aorta during thoracotomy, such as hemorrhage from enlarged collateral blood vessels, recurrent laryngeal or phrenic nerve injury, and spinal cord ischemia [5]. It was, hence, the management strategy chosen for our patient.

Ascending to descending aortic bypass has been associated with low mortality and morbidity like in the most recent series by Wang et al. [5] with reduced rate of complications. In this work, we report the very first case of large pseudoaneurysm after this type of surgery; interestingly, the collection seemed to have developed with a certain delay after the intervention as the initial control imaging was satisfactory; we assume that it was consecutive to a latent discrete leak at the proximal anastomosis of the bypass yielding 30 days later a massive compressive pseudoaneurysm manifesting with signs of acute heart failure. Fortunately, we have been able to promptly and successfully manage this complication reconstructing the ascending aorta with a Bentall procedure, aortic valve replacement, resection of the pseudoaneurysm and re-implantation of the proximal anastomosis of the bypass on the Bentall tube.

Download English Version:

<https://daneshyari.com/en/article/5971895>

Download Persian Version:

<https://daneshyari.com/article/5971895>

[Daneshyari.com](https://daneshyari.com)