



## Image of the Issue

## A rare complication: an attempt of retrieval of an aortic valve wrapped with pig tail catheter during transcatheter aortic valve implantation



Bekir Serhat Yildiz <sup>a,\*</sup>, Yusuf Izzettin Alihanoglu <sup>a</sup>, Ihsan Alur <sup>b</sup>, Harun Evrengul <sup>a</sup>, Dayimi Kaya <sup>c</sup>

<sup>a</sup> Pamukkale University, Medical Faculty, Department of Cardiology, Denizli, Turkey

<sup>b</sup> Pamukkale University, Medical Faculty, Department of Cardiovascular Surgery, Denizli, Turkey

<sup>c</sup> Dokuz Eylul University, Medical Faculty, Department of Cardiology, Izmir, Turkey

## ARTICLE INFO

## Article history:

Received 16 June 2015

Accepted 22 June 2015

## Keywords:

Transcatheter aortic valve implantation

Pig tail catheter

## ABSTRACT

Transcatheter aortic valve implantation is preferred to treat high surgical risk patients with severe aortic stenosis. Wrapping of a pig tail catheter with device struts during transcatheter aortic valve implantation is a very rare complication. In this report, we present the images and videos of an attempt of retrieval of an aortic valve wrapped with pig tail catheter during transcatheter aortic valve implantation in a 71-year-old man.

© 2015 Elsevier Inc. All rights reserved.

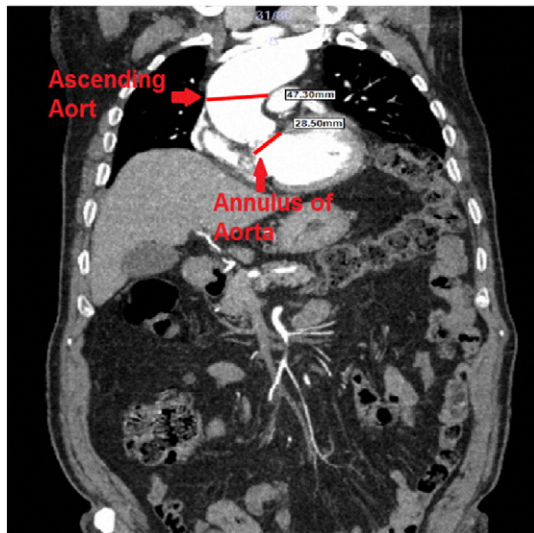
A 71-year-old male patient with a previous coronary artery bypass grafting was admitted to our hospital for transcatheter aortic valve implantation (TAVI), based on severe symptomatic aortic valve stenosis (dyspnea NYHA class III–IV, aortic valve area of 0.7 cm<sup>2</sup> with a mean gradient of 44 mm Hg with an ejection fraction of ~30% on transthoracic echocardiography), high estimated surgical risk (estimated logEuroScore of 36.23%). Multi slice computed tomography was showed a severely calcified tricuspid aortic valve and ascending aorta dilatation (48 mm) (Fig. 1). The 18-French sheath was inserted, and after aortic valve predilatation with a 23 mm balloon a 31 mm self-expanding Medtronic CoreValve prosthesis (Medtronic Inc., Minneapolis, USA) was implanted via femoral access. However, despite burst pacing the valve became unseated, and the valve embolised from the annulus distally and lodged at the ascending aorta (Video 1). An attempt was made to retrieve the device percutaneously into delivery sheath. But this was unsuccessful and further complicated the procedure by

wrapping of a 5 French pig tail catheter (PTC) with device struts. A 0.0035" guidewire was placed in PTC to straighten and retrieve it. This attempt was ineffective (Video 2). The Snare (En Snare®, Merit Medical, Utah, USA) was inserted through the 6 F sheath on the left femoral artery, and was used to capture PTC that was advanced into the abdominal aorta (Video 3). The corona of CoreValve prosthesis was retrieved up to the aortic bifurcation using the snare but could not be extricated (Video 4). The olive was ruptured during retrieval of delivery sheath. Traumatic acute aortic dissection, extending to femoral artery was seen. The patient was given to surgery. Wrapping PTC and broken olive of delivery sheath was excluded without bleeding by surgery (Figure 2A–B). But patient died due to ventricular fibrillation after repair of aortic dissection in one hour. In conclusion, PTC should be retrieved before gathering the embolised valve due to wrapping of it with valve struts.

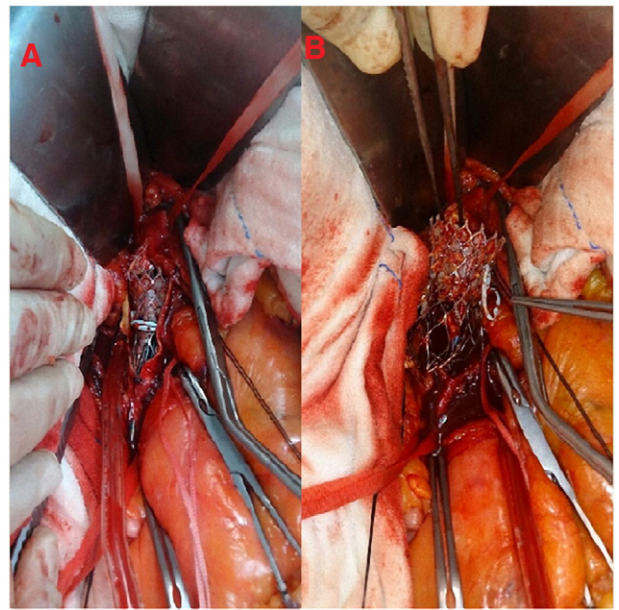
Supplementary data to this article can be found online at <http://dx.doi.org/10.1016/j.carrev.2015.06.004>.

\* Corresponding author at: Pamukkale University, Medical Faculty, Department of Cardiology, 20100, Kinikli / Denizli, Turkey. Tel.: +90 5362195263 (mobile); fax: +90 2582131034.

E-mail address: [bserhatyildiz@yahoo.com](mailto:bserhatyildiz@yahoo.com) (B.S. Yildiz).



**Fig. 1.** Measurements of ascending aorta diameter and aortic annulus diameter on multi-slice computed tomography (coronal section).



**Fig. 2.** A-Wrapping pig tail catheter around the 31 mm self-expanding Medtronic CoreValve prosthesis in abdominal aorta. B- Exclusion of wrapping pig tail catheter and device.