

Spontaneous mechanical aortic valve leaflet dislocation during implantation

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Abstract

Acute or delayed mechanical valve fracture with possible migration is a rare problem seen after valve replacement. We report a patient where mechanical aortic valve leaflet detachment was encountered during implantation. The missing leaflet was retrieved in the left atrium at the level of the right lower pulmonary vein. This has not yet been described, and prompt recognition and intervention is warranted.

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Abstract

Acute or delayed mechanical valve fracture with possible migration is a rare problem seen after valve replacement. We report a patient where mechanical aortic valve leaflet detachment was encountered during

implantation. The missing leaflet was retrieved in the left atrium at the level of the right lower pulmonary vein. This has not yet been described, and prompt recognition and intervention is warranted.

Case description

A 68-year-old patient having severe aortic valve stenosis was scheduled for valve replacement. Intraoperatively, a 19 mm St. Jude Regent (St. Jude Medical, Minneapolis, MN, USA) mechanical valve was implanted. During inspection of the valve, one of the leaflets detached from the pivoting system towards the left ventricle (Figure 1B).

Exploration through the aortic valve was ineffective. Through an incision at the Sondergaard's groove, the migrated disc was found at the orifice of the right inferior pulmonary vein.

The prosthesis was detached and a new 19 mm mechanical valve was implanted. The patient had an uneventful postoperative course. Strangely, meticulous inspection of the explanted prosthesis and leaflet did not reveal fracture of the strut or pivoting system. (Fig 1A).

Spontaneous leaflet missing or fracture of mechanical valve prosthesis is uncommon in literature [1]. In most reports, a fracture of the leaflet is seen after extraction [2-4]. Overall, outcomes of mechanical aortic valve replacement is excellent [5]. Although extremely rare, the possibility of leaflet detachment should be taken into account and prompt action is mandatory.

Figures

Figure 1

Panel A:

Explanted mechanical valve with retrieved leaflet.

Panel B:

Surgeon's view with the mechanical valve in place, lacking one leaflet (white asterisk).

Data availability statement

Data available on request from the authors.

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Conflict of interest

None.

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