Cardiology (ESC/EACTS). Patient’s clinical status, concomitant left-sided valve surgery, and the aetiology of TR usually determine the appropriate therapeutic strategy in each individual case (Figures 7 and 8).

Conclusions

Assessment of FTR is challenging due to the complex anatomy of both the TV and the RV. However, identification of the mechanism of regurgitation, reliable grading of its severity, accurate quantitative data about extent of TV tethering, TA dilatation, and RV enlargement are crucial for selecting patients who may benefit of early surgical repair and tailor the intervention in order to avoid progression to right-heart failure.

Finally, a better understanding of FTR pathophysiology and anatomy will provide the bases for developing percutaneous procedures to treat TR in high-risk surgical candidates.

References

The list of references is available in the online version of this paper.

CARDIOVASCULAR FLASHLIGHT

Transapical aortic valve-in-valve implantation using a ‘partially inflated valvuloplasty balloon’ for valve recovery out of the left ventricle

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A frail 77-year-old man with severe aortic stenosis (Pmax/Pmean gradient of 67/34 mmHg, aortic valve area 0.8 cm²) underwent a valuable bailout strategy in the case of valve dislocation of the SapienTM prosthesis into the left ventricle (LV) during transapical aortic valve implantation. Major comorbidities included coronary three-vessel disease status post-bare-metal stent implantation (Coroflex®), B. Braun, Melsungen, Germany), status post-multiple myocardial infarctions, infrarenal aortic aneurysm fitted with a Y-prosthesis and a history of severe Morbus Parkinson with extensive co-medication. After left anterior minithoracotomy, apical puncture, and positioning of the guide wire, TA-AVI was performed. Owing to low balloon volume ventricular embolization of the first SapienTM prosthesis occurred (Panel A). With the partially inflated valvuloplasty balloon it was possible to stepwise push the prosthesis into the LV outflow tract and to dilate it there (Panels B and C). A second 29 mm SAPIENTM valve was then implanted successfully as valve-in-valve in a slightly higher position (Panels D and E). The early postoperative course was uneventful. Three months after surgery, the patient remains asymptomatic with consistently low transvalvular gradients (P max/Pmean 5/3 mmHg).

The presented report describes a bailout option where using a careful, stepwise, two-men manoeuver resulted in successful valve recovery and implantation of a second SAPIENTM prosthesis. Since our strategy resulted in acceptable gradients at short-term follow-up, we believe this is a feasible alternative for unsuccessful TAVI. Despite the intraoperative challenges, taking advantage of the joint expertise of the heart team, this manoeuver led to an excellent functional result.

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