A rescue option procedure post-transapical transcatheter aortic-valve implantation†

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I have read with great interest the article by Kempfert et al. [1] ‘A second prosthesis as a procedural rescue option in transapical aortic valve implantation’. In this article, the authors present the results of a cohort of patients undergoing a second placement of SAPIEN™ valve affirming that it is a valuable ‘bailout’ technique in case of VSD, dysfunctional leaflets or too low placement of the first prosthesis.

The authors report that approximately 40% of dysfunctional valves is due to ‘malfunctional leaflets’. They state that the VinV only works if the leaflets of the first valve are fully covered by the stent of the second valve. Nevertheless in fig. 2 the valves are not completely covered by a second valve. Moreover, they state that the low positioning was attempted in all cases due to low insertion of the coronary arteries. But a second SAPIEN™ prosthesis was successfully implanted in all seven patients in a slightly higher position (in the direction of the ascending aorta).

How could the authors explain that? Is it correct to define these leaflets as ‘malfunctioning’?

The second valve with the same size would then overextend the first one increasing at the same time the radial forces and thus eliminating much of the ‘recoil’ effect. Do not the authors think that it would be better reballoning the first valve implanted avoiding the rupture of the leaflets?

Finally, I would like to know whether the authors have a pacing problem during the first procedure and whether there was a correct axis between the valve plane and prosthesis during valve displacement with transapical implant.

REFERENCES