

Valve-in-valve implantation for tricuspid bioprosthetic valve failure. A multicentric experience.

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Tricuspid valve-in-valve (VIV) implantation has recently emerged as a possible therapeutic option when a bioprosthetic valve degenerates. We report here a multicentric experience and a series of 5 patients.

From 2012 to end 2013, 5 patients underwent tricuspid VIV implantation. All patients had a combination of tricuspid valve stenosis and regurgitation with right heart failure requiring high dose of diuretics. In addition, patients 2 and 3 suffered from protein losing enteropathy (PLE).

Patient and catheterization data are listed in Table.

	Pt 1	Pt 2	Pt 3	Pt 4	Pt 5
Pathology	Ebstein	VSD closure	Ebstein	Ebstein	Tri. dysplasia
N° of previous surgery	3	1	3	2	1
Bioprosthesis	unknown	27 mm Mitroflow	27 mm Mosaic	33 mm CE	31 mm CE
Sex	F	F	M	M	F
Age (years)	60	44	16	15	27
Presternting	Yes	yes	No	yes	Yes
Pacing	no	no	yes	no	no
Valve	22 mm Melody	22 mm Melody	23 mm Ed. Sapien	23 mm ED Ed. Sapien	29 mm Ed. Sapien
Follow-up (months)	11	6	12	12	/

CE: Carpentier Edwards; Ed.: Edwards, Pt: patient; Tri.: tricuspid.

In pt 1, tricuspid annulus reduction was performed by 4 overlapping stents before implantation. In patients 3 and 5, valved stent embolized just after release respectively in the right ventricle and right atrium. Over the extrastiff exchange wire, Sapien valve was stabilized close to the tricuspid annulus using a self-expandable stent (Optimed) before further valve implantation with success. During follow-up, control echocardiography showed a minimal mean transvalvular gradient and no significant regurgitation. The 2 pts with PLE improved significantly the albumin level.

To conclude, tricuspid VIV implantation is an effective procedure using the Melody or the Edwards Sapien valves with good short and mid-term results. Knowledge of the true minimal diameter is essential to choose the appropriate valved stent. However, further studies with longer follow-up are clearly mandatory.