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Early degeneration of a tricuspid Edwards Sapien valve-in-valve replacement due to papillary muscle overgrowth

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A 57-year-old patient presented with dyspnea and malleolar edema.

She had a complex cardiac history. at the age of 12 she underwent closure of an ASD type primum and mitral valve plasty. Due to insufficiency a tricuspid and redo mitral valve repair with an annuloplasty ring was performed at the age of 50. One year later the mitral and tricuspid valve had to be replaced and epicardial pacemaker leads implanted. Four years later she presented again with symptoms of tricuspid regurgitation due to early degeneration of tricuspid valve. Because of frailty, it was decided in the heart team to perform a percutaneous tricuspid valve in valve replacement with a Sapien 26 prosthesis (*Edwards Lifesciences Inc., Irvine, California*) improving her symptoms considerably (panel A, B, C, D). However, one year later she presented again with extreme fatigue, dyspnea at minimal exertion due to severe tricuspid regurgitation.

Clinical and echocardiographic diagnosis of severe tricuspid regurgitation (panel E) were made and the patient was found fit enough to undergo again cardiac surgery.

During the operation it was found that the Edwards Sapien frame was correctly implanted and that the bioprosthesis degeneration was related to papillary muscle overgrowth causing impression of two of the leaflets (panel F). The valves were explanted and a new bioprosthesis was implanted. Postoperative course was uneventful.

Remaining papillary muscles after tricuspid valve replacement might be a risk for early failure after percutaneous tricuspid valve in valve replacement, even if correctly positioned.