



62

TRANSCATHETER TREATMENT OF AN EARLY DEGENERATED PULMONARY VALVE BIOCONDUIT WITH STENTING OF THE RIGHT PULMONARY ARTERY AND PULMONARY VALVE-IN-VALVE

Ottavia Cozzi, Patrizia Presbitero, Damiano Regazzoli, Antonio Mangieri, Angelo Oliva, Mauro Gitto, Gulrajs Jamie, Alessandro Sticchi, Antonio Colombo, Bernhard Reimers

Clinical and Interventional Cardiology, Cardiac Center, Istituto Clinico Humanitas, Humanitas Research Hospital, Rozzano

Rational: This is a case of a 81 year old high surgical risk patient, presenting twice with right heart failure because of early degeneration of a biological pulmonary valve in a pericardial bioconduit associated with a tight stenosis at the level of the ostium of the right pulmonary artery.

Technical resolution: The treatment comprised stenting of the right pulmonary artery with a covered stent (CP 20/35 mm) because of the high risk of dissection and injury to the pulmonary arterial wall. A subsequent pulmonary valve-in-valve with Edwards 26 mm. Pre-stenting of the pulmonary conduit was not feasible because of interference with the right pulmonary artery stenting. A slight oversizing of the THV was performed after accurate repeated balloon-sizing in order to localize the waist where the surgical valve was attached and individualize the exact size where to deliver the new transcatheter valve.

Clinical implications:

- Degeneration of a pulmonary bioconduit can be safely treated with a percutaneous approach in high surgical risk patients.
- Accurate pre ed intraprocedural planning is key for stenting and valve sizing, by combining echo, CT scan and fluoroscopy.
- Pre-stenting may not be needed if the Sapien valve is precisely sized and positioned.

Perspectives: Proper assessment and multimodality imaging can make this complex procedure safer and improve patients' outcome.