

## PW3-8

### Importance of coronary artery anatomy and variation in percutaneous pulmonary valve implantation

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**Introduction:** The percutaneous implantation of pulmonary valves (PPVI) has become standard in many centres. The coronary anatomy and variability has significant impact on the suitability of this procedure. We report on our first 50 patients with right ventricular outflow-tract obstruction and the attempt to implant pulmonary valves.

**Methods:** Prospective study in all patients scheduled for PPVI. A total number of 50 patients was enrolled, there were 27 male and 23 female. In 34 patients PPVI was successfully completed (22 Melody® valves, 12 Edwards Sapien® valves). Our standard protocol included a maximum balloon inflation using high pressure balloons to ensure complete dilatation of the stenosed RVOT and simultaneous selective coronary angiography in all patients. In the remaining 16 patients PPVI was not possible. This was due to a subpulmonary stenosis in 1 patient, an extensive size of the RVOT after standard balloon sizing/dilatation in 1 patient, but due to coronary anatomy in 14 (= 28%).

Compression of the coronary blood flow occurred in 10 patients during balloon dilatation/sizing, and coronary anatomy was found to close to possible stent location in 3.

**Discussion.** Coronary anatomy and variation prevents successful PPVI in a significant proportion of unselected patients with RVOTO. A standardised protocol to simulate stent implantation is compulsory to perform the procedure safely.

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