

# Double pre-stenting for percutaneous pulmonary valve implantation



## *Doble stent previo al implante de válvula pulmonar*

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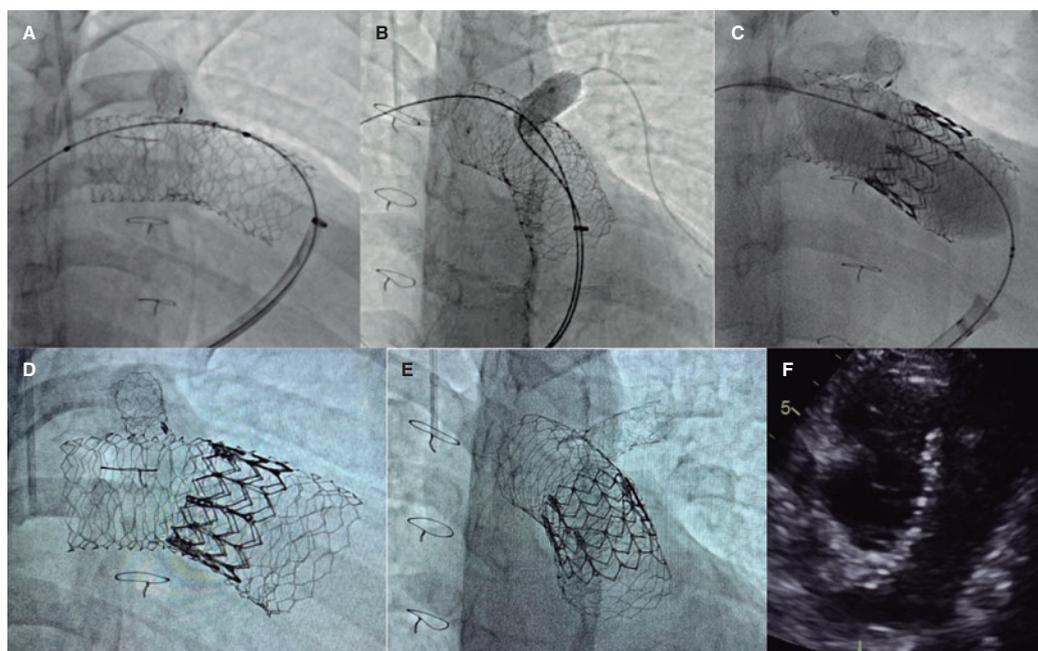


Figure 1.

Pre-stenting of the right ventricular outflow tract (RVOT) is often performed before percutaneous pulmonary valve implantation to guarantee a stable landing zone. One common off-label indication is the presence of a large native RVOT, which requires the anchoring of an extra-large stent.

This is the case of a 17-year-old woman with a repaired Fallot's tetralogy admitted for the assessment of severe pulmonary regurgitation with RV dilatation ([video 1 of the supplementary data](#)). The patient was ranked as NYHA functional class III. The cardiac magnetic resonance imaging revealed the presence of a large RVOT with diameters of 27 mm x 26 mm ([video 2 of the supplementary data](#)).

For SAPIEN XT valve implantation (Edwards Lifesciences, United States) and to prevent stent migration, the "double-stent" technique was used. A 57 mm AndraStent XXL stent (Andramed, Germany) was pre-mounted on a 26 mm balloon followed by distal-to-proximal implantation from right pulmonary artery to pulmonary trunk. Afterwards, a second 48 mm AndraStent XXL stent was pre-mounted on a 30 mm balloon and partially implanted overlapping the former stent ([figure 1A](#)). A stent that remained in the left pulmonary branch that was implanted at a younger age was dilated with a 10 mm balloon through the new stents ([figure 1B](#)). Then, a 29 mm SAPIEN XT valve with 2 extra mL for balloon inflation was advanced and implanted successfully ([figure 1C,F](#)). No residual gradient or significant regurgitation were reported. The patient was discharged 2 days later and remains in NYHA class I after 8 months. The father's patient has given his verbal consent for the publication of this case report.

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Double overlapping pre-stenting with the AndraStent XXL stent provides valid anchoring support for percutaneous pulmonary valve implantation in large native RVOTs.

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#### **AUTHORS' CONTRIBUTIONS**

All the authors drafted this manuscript, read and approved its final version.

#### **CONFLICTS OF INTEREST**

None whatsoever.

#### **SUPPLEMENTARY DATA**



Supplementary data associated with this article can be found in the online version available at <https://doi.org/10.24875/RECICE.M22000275>.