Introduction: The percutaneous implantation of pulmonary valves (PPVI) has become standard in many centres. Initial results have shown that pre-stenting of the RVOT is necessary to guarantee good long-term results of the valve. Stenting should aim at a complete stabilization of the RVOT without recoil to prevent stent fracture.

Patient: We report on a 11 year old boy with d-TGA, pulmonary atresia and VSD who underwent a Rastelli procedure as initial treatment. Due to the anatomy, the implanted RV-PA Contegra®-conduit (12 mm) was entrapped between the heart and the sternum and severely compressed, leading to suprasystemic RV-Pressures. Before PPVI sequential stenting on the complete RVOT was necessary to stabilize the RVOT and then implant an 18 mm Melody® valve. We used a total of 6 stents to stabilize the RVOT and avoid repeat external compression and recoil. The residual gradient was 10 mmHg, the RV-Pressure 40/0-10. On follow-up there is no recoil now 8 months after the procedure and no signs of valve malfunction.

Discussion: Stabilization of the RVOT may require several stents to overcome the special anatomy in patients with congenital heart defects. This approach however should be followed to achieve long lasting function of the valve.