

# A case of successful endovascular treatment of acute BT-shunt occlusion

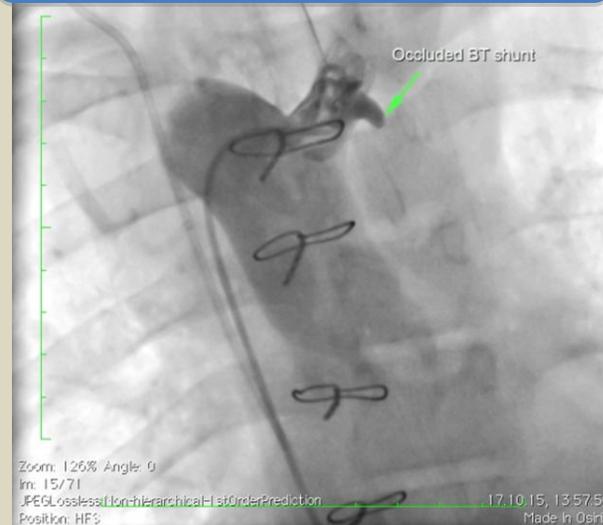
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**Introduction:** Occlusion of systemic-to-pulmonary arterial shunts has been reported with the incidence of 3% to 20%. It can be managed medically, invasively or surgically. The various catheter-based techniques (local thrombolytic therapy, stent placement, balloon angioplasty) are the preferred management methods; they are highly successful and potentially avoid high-risk reoperation for shunt replacement.

**Case Presentation:** A 14-year-old boy with a Down syndrome, presented to our hospital with the diagnosis of Tetralogy of Fallot and pulmonary artery hypoplasia, with a resting SatO<sub>2</sub> of 70-75%. He was considered a bad candidate for total correction, so a palliative operation was decided to be done. A left sided BT-shunt with a 5-mm Gore Tex tube was placed. On the evening of first postoperative day a sudden drop in SatO<sub>2</sub> was detected. Medical management was unsuccessful. An angiography performed on the morning of the next day revealed a totally occluded BT-shunt.

## Reoperation or Endovascular Intervention?



We decided to try to fix it invasively. After 80 mg/kg heparin administration we took a 6 Fr MPB1 guiding catheter, successfully crossed the occlusion with an extra-support 0.014'' wire and made several predilatations with coronary semi-compliant balloons. Then after introducing a second, hydrophilic 0.014'' wire for an extra support we deployed two overlapping 5/24 mm and 5/16 mm bare metal stents (Liberte, Boston Scientific) and performed several high-pressure postdilations with a 5 mm NC

balloon. SatO<sub>2</sub> immediately rose up to 88-90%. Aspirin 300 mg and Clopidogrel 600 mg loading dose were given. Patient was transferred to the intensive care unit. He was extubated the same day and discharged a week after.

## Successful Recanalization



**Conclusion:** Endovascular intervention on acutely occluded BT-shunt is a safe and feasible way of treatment with good short-term results and may be the first choice in such cases.