EXCITING INTERVENTIONS IN THE CARDIAC CATHETERIZATION LAB

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GOALS

Overview of interventional cases performed at Texas Children’s Hospital

Exciting cases
Cath Lab Case Distribution 2014- Jan 2019

- Diagnostic: 23%
- Biopsy: 25%
- Interventional: 49%
- Therapeutic: 3%
CATH LAB INTERVENTIONS

• Open things
  • Balloon angioplasty and stenting of vessels
  • Valvuloplasty

• Close things
  • Device closure of VSD, ASD or PDA
  • Coil occlusion of collaterals
  • Device closure Fontan fenestration
Percutaneous Valves
Indication for Percutaneous Pulmonary Valve

• Class IIa: It is reasonable to consider percutaneous pulmonary valve replacement in a patient with an RV-PA conduit with associated moderate-severe pulmonary regurgitation or stenosis provided the patient meets the inclusion/exclusion criteria for the available valve
CONGENITAL HEART LESIONS REPAIRED WITH RV-PA CONDUITS

• Tetralogy of Fallot
• Truncus Arterious
• Pulmonary Atresia
• Others

Truncus with RV-PA conduit
Patient case

• 17 year old male with history of TOF with absent pulmonary valve s/p repair with valved 21mm RV-PA conduit

• Referred to cath lab with severe RV-PA conduit obstruction with mean gradient of 63mmHg and moderately dilated RV with moderate dysfunction
PATIENT CASE
MELODY VALVE

- Cow jugular vein hand sewn onto platinum stent
- Placed with a 22 Fr system to femoral vein
- 18mm, 20mm or 22mm valve

http://www.medtronic.com/melody/patient/therapy.html
PATIENT CASE
Patient case results

- Underwent implantation of 22mm Melody Valve
- Post procedure echo: mean gradient of 18mmHg, now with mildly decreased RV function (previously moderate)
- Discharged the day after the procedure
Percutaneous Pulmonary valve replacement

• Melody Valve and Edwards Valve
• Historically placed in RV-PA conduits for patients with conduit stenosis or severe regurgitation with dilated RV
• Now have placed several in native RVOT. For example TOF with patch repair instead of a conduit
Patient case jm

- 14 year old male with TOF s/p repair with a 16mm RV-PA conduit
- He had echo moderate to severe pulmonary regurgitation and moderate stenosis of the RV-PA conduit
- Initial cath: “Due to the left anterior descending coronary artery coursing between the native RVOT and the RV to PA conduit, the landing zone for a transcatheter pulmonary valve if placed in the native RVOT is very short. Decision was made that he needs a shorter valve, probably a 23 mm Edwards Sapien valve and that a melody valve would not be appropriate at this time due to its longer length.”
Patient Case #2
Patient Case #2
Case Results

- Placement of 23mm Edwards Sapien valve
- Post procedure echo revealed mild conduit stenosis and trivial regurgitation
- Patient did well and went home the day after the procedure
Summary

• Many new valves being developed right now. In all different shapes and sizes.
• Several are in clinical trials right now.


• St. Jude Medical; Products Overview. Retrieved from https://health.sjm.com/amplatzer-septal-occluder

• St. Jude Medical; Product Catalogy. Retrieved from https://health.sjm.com/amplatzer-septal-occluder


COMMENTS/QUESTIONS?