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Characterization of young patients who underwent early transcatheter or surgical repair of atrial septal defects; a single center perspective

Bradley Dayton, DO¹; Wilson King, MD^{1,2}; Saurabh Chiwane, MD^{1,2}; Andrew Fiore, MD^{1,2};
Charles Huddleston, MD^{1,2}; Robert Petersen, MD^{1,2}; Corinne Tan, MD¹.

1 Saint Louis University School of Medicine, St. Louis, MO, 2 SSM Health Cardinal Glennon Children's Hospital, St. Louis, MO



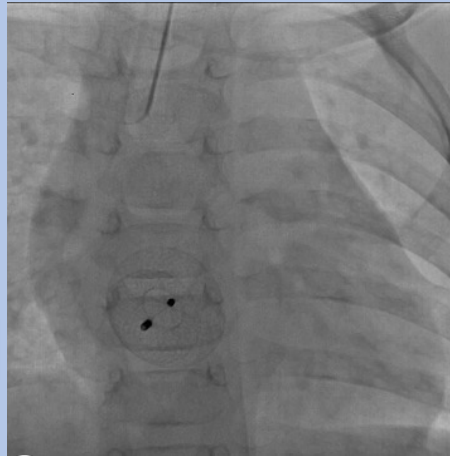
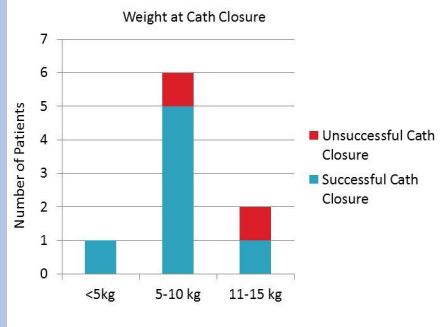
Background

- Pediatric patients with ASDs are typically monitored until 3-5 years of age, and then undergo either catheter-based device closure or surgical repair.
- ASDs are closed earlier in some pediatric patients for a variety of indications.
- We sought to characterize the indications and results at our institution.

Indications cited for early ASD closure	n
Failure to thrive	9 (27%)
Symptoms of Heart Failure	8 (24%)
Pulmonary Hypertension	7 (21%)
Persistent need for respiratory support	5 (15%)
Frequent Upper/Lower Respiratory Infections	4 (12%)
Common Atrium	4 (12%)
Chronic Lung Disease of Prematurity	3 (9%)

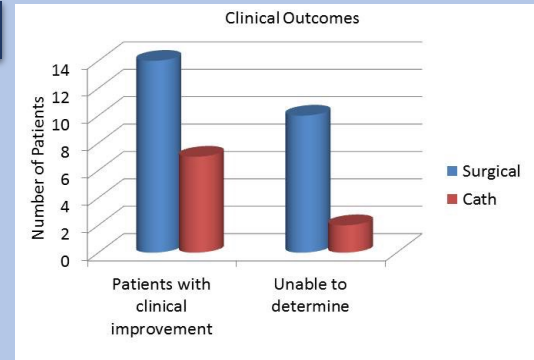
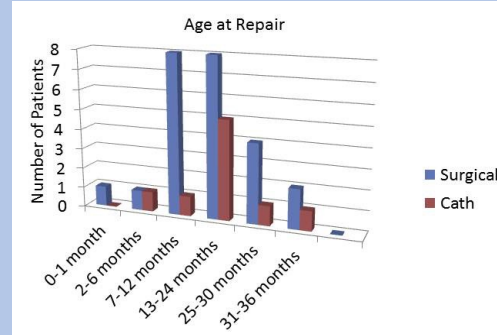
Methods

- Retrospective chart review:
- Cath lab database 9/18/2012 to 3/24/2021
- CTS database 3/8/2013 to 3/24/2021



Results

- **33 patients** (19 female) < 3 years old underwent early ASD closure (24 surgical, 9 catheter device, one of which was a hybrid procedure).
- **Weight at Repair:** Mean 8.7 kg (Range 2.16 kg to 16.9 kg)
- **Age at Repair:** Mean 17 months (Range 14 days to 35 months)
- One patient had a post-operative arrest ultimately requiring heart transplant.
- One ASD closure device required retrieval and replacement POD #1
- **There were no deaths.**
- In patients with follow up data, **21 (64%) had clinical improvement** (symptoms and/or decreased respiratory support).



Conclusions

- Percutaneous ASD closure was performed at our institution safely in a patient with a weight as low as 4.34 kg.
- Surgical closure in as low as 2.16 kg
- 64% overall of both groups resulted in clinical improvement

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Contact: bradley.dayton@health.slu.edu