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A SUCCESSFUL AORTIC BIOPROSTHETIC VALVE FOR TRICUSPID VALVE REPLACEMENT IN A 1-YEAR-OLD MALE WITH REFRACTORY CANDIDA ENDOCARDITIS: A CASE OF MULTIDISCIPLINARY CHALLENGE, SURGICAL STRATEGY AND TECHNICAL NUANCES

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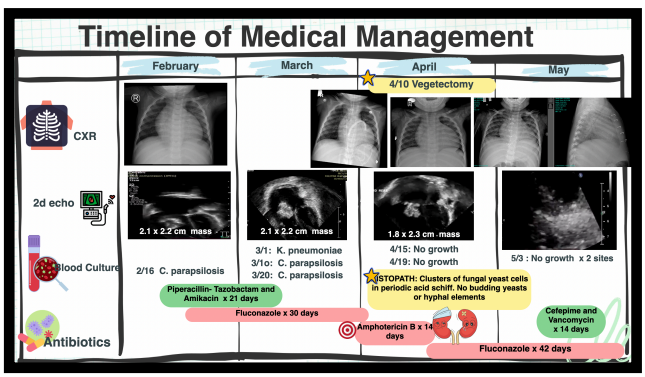
Introduction: Fungal endocarditis in infants is rare but carries high morbidity and mortality. We present a challenging case of a 1-year-old male with Candida endocarditis involving the tricuspid valve (TV), refractory to medical therapy, who underwent successful underwent tricuspid valve replacement (TVR) using a stentless aortic bioprosthesis.

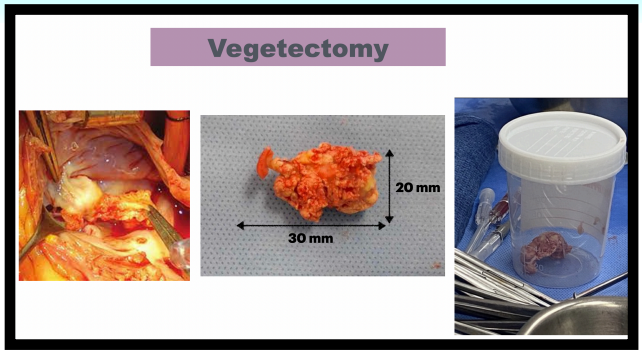
Case Description: The patient, with a history of prolonged hospital stay and broad-spectrum antibiotics and antifungal, presented with persistent fever, respiratory distress, and fungal sepsis, developed refractory TV destruction despite antifungals and antibiotics. Echocardiography revealed large vegetations on the TV measuring 22mm in widest diameter with severe regurgitation. Despite 3 weeks broad spectrum antibiotics, 4 weeks of liposomal amphotericin B and 2 weeks fluconazole, the infection persisted with worsening hemodynamics. A multidisciplinary team (pediatric cardiology, cardiac surgery, and infectious disease) opted for an Emergent Vegetectomy and Tricuspid Valve Replacment using a 19-mm bioprosthetic aortic valve. The surgery was complicated by friable tissues and extensive destruction of the valve leaflet, but postoperative recovery was remarkable.

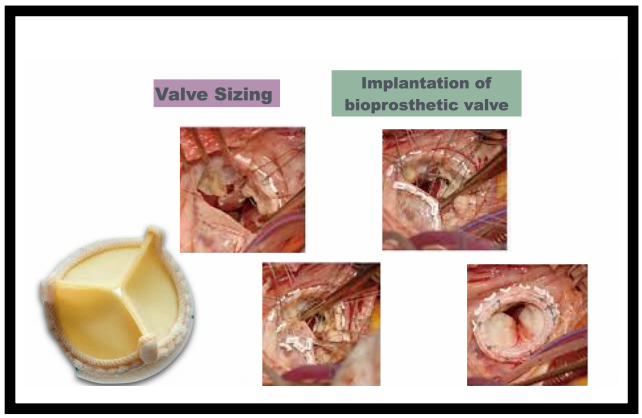
Discussion: Fungal Endocarditis has aggressive nature specially on immunocompromised infants. An early surgical intervention has an important role when medical therapy fails. Techical challenges may encounter in infants who undegor Tricuspid Valve Replacement specifically on small anatomy and anticoagualant and antiplatelet risks.

Outcome: The child was discharged on antifungals and antiplatelet, with no recurrence. On 2 weeks post discharge OPD follow-up, patient was asymptomatic, no febrile episodes, no bleeding episodes. Continued his cardiac medications and antiplatelet.

Conclusions: Tricuspid Valve Repair, though high-risk, can be lifesaving in fungal endocarditis. A team-based approach, tailored perioperative care, and close follow-up are critical for success. TVR with an aortic bioprosthesis is a viable option for infants with fungal endocarditis, provided meticulous surgical technique is employed.







INTRAOPERATIVE FINDINGS

Slide Subtitle

- pericardial effusion, straw in color, appox 30cc in volume dilated RA
- non coaptating/apposing tricuspid valves
- (+) 3cm x 2cm vegetation adherent to the anterior leaflet of tricuspid valve
- noted with destruction of the leaftets and cords, with intact annulus
- (+) 0.2cm interatrial communication

INTRAOPERATIVE FINDINGS

Slide Subtitle

- **Pre TEE**
  non thickened TV leaflets with noted of a pedunculated mass near it measuring 1.9 x 2.3 cm area of 3.9 x 4.11 cm2, heterogenous, irregularly bordered solitary mass, with stalk seems to be attached to the RA free wall, near the anterior tricuspid valve leaflet, which moves to and from across the tricuspid valve inflow, producing mild TR, minimal pericardial effusion, PAP of 33mmHg
- **Post TEE**
  s/p vegetation and TV replacement, Medtronic Avalus Bioprosthetic 19mm TV annulus 1.5 cm (Z score 0)
  Mild TR, no paravalvular leak, Mild MR