2017: Top 10 Aortic Valve Disease

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Methods

• PubMed search: “Aortic Valve”
  • Oct 1, 2016 to present
  • Excluded reviews, new guidelines

• Conflict:
  • I am an interventional cardiologist
  • Top Impact Factor Journals:
    NEJM, JAMA, JACC, Circulation, European Heart J, Lancet, JThCVS
Registry of 1038 patients treated with the Corevalve Evolut R TAVR prosthesis

At discharge or 30 days:
- Mean grad 8.5 mmHg
- Mod/severe AR 1.9%*
- 30-day mort 1.9%
- Stroke 1.8%
- PPM 17.5%

*no core lab

Take-Home Message:

Real world outcomes in patients at increased operative risk show safety and efficacy of TAVR

Take-Home Messages:

- Frailty is common
- Simple scales predict outcomes

1020 pts undergoing TAVR or SAVR

- Compared 7 indices of frailty
- EFT (essential frailty toolbox) strongest predictor with OR death 1 year = 3.72

Alfialo et al, JACC 2017;7:689-700
Subclinical leaflet thrombosis in surgical and transcatheter bioprosthetic aortic valves: an observational study

Tarun Chakravarty, Lars Søndergaard, John Friedman, Ole De Backer, Daniel Berman, Klaus F Kofod, Hasan Jilaihawi, Takahiro Shiota,

• Combined RESOLVE and SAVORY Registries
• 890 pts having 4D CTA at mean of ~80 days post SAVR and TAVR
• Subclinical leaflet thrombosis in 12% (4% SAVR, 13% TAVR)
• Less common with OAC (both warfarin and NOAC) – 4% vs 15%
  • Resolved 100% with OAC, 9% with DAPT
  • Assoc with TIA (not stroke)

Take-Home Messages:
  1. HALT after bioprostheses is real and concerning
  2. Some form OAC likely to be a future rec

Chakravarty et al, Lancet 2017;389:2383-92
Take-Home Messages:
Safe, trend to efficacy
FDA approved

What to do?

Kapadia et al, JACC 2017;69:367-77
Take-Home Messages:

1. Effective with some potential advantages for cross clamp/CPB times
2. May be an advantage in minimally invasive surgery
3. Need more data on PPM, PVL, durability

Barnhart et al., J Thorac Cardiovasc Surg 2017;153:241-51
Valve-Sparing Root Replacement Compared With Composite Valve Graft Procedures in Patients With Aortic Root Dilation

Maral Ouzounian, MD, PhD, Vivek Rao, MD, PhD, Cedric Manihot, PhD, Nachum Abraham, MCM, Christopher M. Feindel, MD, MSc, Tirone E. David, MD

Take-Home Message:

- 616 pts 1990-2010
  - In-hosp mort and stroke similar
  - CVG had more adverse events, including mortality
  - Bio-CVG more reops (HR 6.9)
  - Mech-CVG more bleeding (HR 5.6)

Ouzounian et al, JACC 2016;68:1838-47
• 333 young (46 yrs) pts undergoing root replacement and reimplantation AV for Marfan (n=124), BAV (n=45), type A dissection (n=28) between 1984-2012
• High overall, event-free, AR-free survival at 15-20 years

Take-Home Message:

Reimplantation of the aortic valve during root replacement “continues to provide excellent clinical results and aortic valve function during the second decade of observation.”

David et al, J Thorac Cardiovasc Surg 2017;153:232-8
Take-Home Message:

Over time, evolving techniques have improved the outcomes of surgery for type A aortic dissection

Parikh et al, J Thorac and Cardiovasc Surg;2017;153:S74-S77
Take-Home Messages:
1. Site volume predicted in-hospital risk-adjusted outcomes
2. Raises questions about specialized, experience-centered models for TAVR

Carroll et al, JACC 2017; 70: 29-41
**Take-Home Messages:**

1. In intermediate risk patients with severe symptomatic AS, TAVR is non-inferior to SAVR for death/disabling stroke at 2 years
2. Will likely change the guideline to class I from IIA

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Reardon et al, NEJM 2017;378:1321-1331