AAOCA Cohort

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PAST STUDIES

• 1. About the registry

• 2. Echo vs. multimodality imaging

• 3. Review of surgical patients
CURRENT STUDY

Ischemic Patient Descriptive analysis

• 560 patients through Dec. 2016
• All patients reviewed and ischemic status determined based on:
  • Exertional Syncope
  • Exertional Arrhythmia
  • Ischemia on exercise test, stress echo, or nuclear perfusion
  • Aborted Sudden Death
  • Sudden Death
• 49 ischemic patients
560 patients enrolled in AAOCA cohort through Dec 2016

- No Testing: N=275
- Negative Ischemia Testing: N=236
- Ischemic Patients: N=49
  - Sudden Event: N=18
  - No Sudden Event: N=31
560 patients enrolled in AAOCA cohort through Dec 2016

No Testing
N=275

Negative Ischemia Testing
N=236

Ischemic Patients
N=49

Sudden Event
N=18

No Sudden Event
N=31
COMPARISON 1

• Ischemic (49) vs Tested Non-Ischemic (236)
  • Ischemic patients were more likely to have surgery (p=<0.001)

• Anomalous Left Coronary (AAOLCA)
  • 46/236 (19%) vs 28/49 (57%), p<0.0001

• Among the AAOLCA patients,
  • Ischemic patients were more likely to have an intramural course, high orifice, and slit-like orifice
COMPARISON 2

560 patients enrolled in AAOCA cohort through Dec 2016

- No Testing
  - N=275

- Negative Ischemia Testing
  - N=236

- Ischemic Patients
  - N=49
    - Sudden Event
      - N=18
    - No Sudden Event
      - N=31
COMPARISON 2

- Sudden Event (18) vs Non-sudden event Ischemic (31)
  - No significant differences in anatomic features
• Surgical treatment of ischemic patients
  • 40/49 underwent surgical repair
    • 39/40 underwent unroofing

• 4 reoperations:
  • Ostial issues

• 9/49 without surgical repair:
  • 4 died
  • 4 referred for surgical repair
  • 1 lack of follow up
Abstract submitted to AATS

**Title:** Anomalous aortic origin of a coronary artery (AAOCA): Are we closer to risk stratification?

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WHY THIS STUDY IS IMPORTANT

• No consensus on how to manage patients
• Physician and institutional practices vary

• Largest database of AAOCA patients
• Potential to find answers:
  • Who is most at risk for ischemia and sudden death?
  • Which lesions are benign?
  • Which lesions require exercise restriction?
  • Which patients should we offer surgery to?
CRITICAL STEPS IN AAOCA

• YOU ARE VITAL TO THIS PROJECT!!!!!!
• Most important aspect of data collection = surgical atomization from surgeon:
  • while the surgeon is in the OR, intramural measurement
  • at least by the end of that day
• This cannot be done later because:
  • SURGEONS FORGET!
  • Anatomy is nuanced
  • All coronaries must be evaluated
  • Measurements in the OR for intramural length
NEXT STEPS

• IMAGING STUDY
  • Will help us figure out which lesions are high risk

• What we need:
  • An echo on CD for every patient enrolled in the study
    • SECOND OPINION PATIENTS
  • All CT imaging on CD
  • All MRI imaging on CD

• All images should be in anonymized DICOM format
TAKE HOME MESSAGES

• This registry has the potential to inform strategy and provide answers where none others have before

• We need surgical atomizations
  • in the OR
  • same day by surgeons
  • Measurements by ruler

• We require all echo, CT and MRI studies on CD to be submitted to the Data Center in an anonymized DICOM format

• How can we help you?