With Uncomplicated Acute TBAD There Is a High Risk Group That Should Be Treated By TEVAR

The VEITH Symposium
Session 8
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THORACIC AORTIC DISSECTION

How Do We Achieve Better Results?

PATIENT SELECTION

Are there factors that predict patients at high risk for disease progression and late aortic events/mortality?

• > 40 mm trans-aortic diameter at diagnosis
• > 22 mm FL diameter at initial diagnosis
• PIT > 10 mm; 12 mm; 15 mm
• Partial FL thrombosis
• FL diastolic BP > TL diastolic BP
• > 1 major abdominal branch (celiac, SMA, RRA, LRA) with aortic FL flow contribution

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WHO IS AT HIGH RISK?

IMPORTANCE OF INITIAL FL SIZE

  - n = 100 consecutive; 49 type B
  - 53 with CT beyond 2 years (mean 31 mos); 28 % with aneurysm (> 60mm)
  - overall aortic diameter not an independent predictor of expansion
  - FL diameter ≥ 22 mm highly predictive
    - Aneurysm formation: 42% vs 5% (p<0.001)
    - Increased mortality: 12% vs 5% (p=0.09)

Three Representative Examples of Long-Term Outcomes

Event-Free Survival Curves

Partial Thrombosis of the False Lumen in Patients with Acute Type B Aortic Dissection

J Thorac Cardiovasc Surg 2013; in Press

- 117 patients . Cox Regression
- False Lumen 5 year Event Free rate
  - Partially Thrombosed 59%
  - Fully Open 65%
  - Fully Thrombosed 96%
A New Mechanism by Which an Acute Type B Aortic Dissection Is Primarily Complicated, Becomes Complicated, or Remains Uncomplicated

Christian Lunow, MD, * Martin Czerney, MD, MBA # Gottfried H. Sudek, MD, Julia Ta, MS, Maria Schoder, MD, Martin Fontoura, MD, Julia Duerstl, MD, Masak Itoh, MD, Michael Granner, MD, and Johannes Lammer, MD

Background: This study was to evaluate the severity of complications in type B dissections. Patients were classified as having uncomplicated, complicated or complicated type B aortic dissection. The location of the type B entry was in the location of the primary entry in the aortic arch, in the location of the primary entry in the descending thoracic aorta, or in the location of the primary entry in the abdominal aorta.

Overall in-hospital mortality rates were 7.6% for uncomplicated type B dissection, 14.3% for complicated type B dissection, and 31.2% for complicated type B dissection. In-hospital mortality rates with medical management were 4.8%, 13.1%, and 28.3%, respectively.

Conclusion

Although much insight has been achieved into the diagnosis and management of aortic dissection over the last 20 years, much work remains. The challenge for the new era will fall to the emerging fields of genomics, bioinformatics, and molecular imaging to determine if the onset of this vexing and frequently lethal condition can be predicted and eventually prevented in individuals at high risk of developing dissection. Until this is a reality, we will continue to evaluate safer and more effective alternative treatments for patients with aortic dissection.