Respiratory tract bleeding secondary to Kommerell’s diverticulum: Hybrid management

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Disclosure

Speaker name: Ivan Arismendi O

I have the following potential conflicts of interest to report:

- Consulting
- Employment in industry
- Stockholder of a healthcare company
- Owner of a healthcare company
- Other(s)

I do not have any potential conflict of interest

X
Discussion

• Definition Kommerell Diverticulum
  • Aneurismatic
  • Aortic arch – Proximal Descendent Ao

• Definition Kommerell Diverticulum
  • Aneurysm perforation
  • Origin Aberrant Subclavian Artery
Fig. 1  Burckhard F. Kommerell (1901–1990).
(Photo courtesy of Dr. Landfried Kommerell; Haar, Germany)
Discussion

• Aberrant Subclavian Artery
  • Incidence 0.5 – 2 %
  • Kommerell Diverticulum 60%
  • Left Subclavian aberrant Artery - Right aortic arch
  • Right Subclavian artery
    • 80% behind esophagus
    • 15% Between trachea and esophagus
    • 5% Anterior Trachea
Discussion

Symptoms in adults

- Dysphagia

Pediatrics

- Recurrent Respiratory Infections
Discussion

• Symptomatic
• 3 cm
• Fistula
• Aortic Dissection
• Distal embolization
• Compression
• Rupture
Repair Techniques

Aberrant subclavian artery and Kommerell aneurysm: Surgical treatment with a standard approach

Nicholas T. Kouchoukos, MD, and Paolo Masetti, The Journal of Thoracic and Cardiovascular Surgery • March 2006
Hybrid Repair of Symptomatic Aberrant Right Subclavian Artery and Kommerell’s Diverticulum

Ivica Vucemilo,¹ John A. Harlock,² Mohammad Qadura,² Mina Guirgis,² Robert N. Gowing,² and Jacques G. Tittley,² Mississauga and Hamilton, Ontario, Canada

Hybrid repair of Kommerell diverticulum

Jahanzaib Idrees, MD,¹ Suresh Keshavamurthy, MD,¹ Sreekumar Subramanian, MD,¹ Daniel G. Clair, MD,⁵ Lars G. Svensson, MD, PhD,¹ and Eric E. Roselli, MD⁵
Case presentation

- 39 Y/O Female
- Hemoptysis - 3 Months
- Retro sternal pain
- Adynamia
- Anemia
Test

- Bacilloscopy
- Upper GI Endoscopy
- Chest X Ray
- Angio CT
What we did...

Hybrid procedure

• Supra Aortic Vessel Revascularization
  - Carotid – Subclavian Bypass
• Subclavian Artery Embolization
• TEVAR
Postoperative Control
Materials

• Reconstruction OsiriX platform Md
• General electric C Arm 9900 Elite
• Graft Dacron 6mm
• Amplatzer Vascular Plug II-IV.
• Thoracic endoprosthesis (Cook Medical Inc., Bloomington, IN)
• 20 min time fluoroscope
• Total operative time 240 min
• 150 cc of contrast medium
Conclusion

The hybrid repair of Kommerell diverticulum with an aberrant Subclavian artery is a safe and effective procedure, in spite of the scarce scientific evidence available.

We believe it is a good technique for a group with experience in open and endovascular surgery.
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