"Cheesewire" – aka endoluminal septotomy

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Disclosures: None

Late distal aortic degeneration

- 52 year old male
- Morbidly obese (BMI 44/160 kg), s/p gastric bypass
- Father died at age 53 – "ruptured aorta"
- AAA on screening ultrasound
- Referred following CTA

Large ascending aorta

Stanford type B dissection

38 – 40mm @ diaphragm
Typical visceral perfusion pattern

Common/internal iliac aneurysms

True, false, and arm access

True lumen confirmation

Septal fenestration

“Cheesewire” septotomy
**Septal fenestration (1996)**

**Aortic dissection: Percutaneous management of ischemic complications with endovascular stents and balloon fenestration**

Ronan M. Holby, MD, UF Syrman, MB, Charles F. Stone, MD, O. Craig Brey, MD, A. Scott Mitchell, MD, and Michael D. Tolle, MD, USA, Calif.

Purpose: The purpose of this study was to evaluate endovascular techniques for management of ischemic complications of chronic aortic dissection. Atherosclerotic dissection is a rare disease entity. The current treatment methods for this condition are limited and are generally palliative. We report the use of balloon catheters and wire-guided fenestration with self-expanding stents in the treatment of ischemia due to chronic aortic dissection.

Methods: The patients had either chronic or acute dissections. They had been treated with open surgical repair or balloon catheter repair. The patients had local ischemic symptoms that were refractory to medical therapy. A catheter was inserted in the aorta, and the balloon catheter was used to create a fenestration. The stent was then placed over the wire. The balloon was inflated and the aorta was occluded. The aorta was then opened, and the stent was deployed. The stent was expanded, and the balloon was deflated. The aorta was then closed, and the stent was removed. The procedure was performed under general anesthesia. The patients had minimal complications. Of the 16 patients, 10 had no complications. Six patients had minor complications.

Results: The procedure was successful in all cases. The patients had improved symptoms. The patients had minimal complications. The procedure was performed under general anesthesia.

Conclusion: Balloon catheter repair is a safe and effective treatment method for managing ischemic complications of aortic dissection. (Yamamoto, 1996;63(3).)

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**Cheesewire septotomy (2011)**

**Vascular Surgery**

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**Aneurysm application (2014)**

**CASE REPORTS**

“Cheese wire” fenestration of a chronic aortic dissection flap for endovascular repair of a contained aneurysm rupture

Jon Tebbut, MD, MPH, and Roger, MD, Lee S. Goldsmith, MD, and Jason. T. Finamore, MD

A 70-year-old man presented with a contained aortic rupture above the aortic bifurcation. The site of the rupture was identified by the aorta. Aortic dissection. The outcome was complicated by the dissection, and the superior mesenteric artery was not patent. An open repair was not possible due to right subclavian artery injury. The “cheese wire” fenestration technique was utilized to create a fenestration over the aorta. The aorta was then opened, and the stent was deployed. The stent was expanded, and the balloon was deflated. The aorta was then closed, and the stent was removed. The procedure was performed under general anesthesia. The patients had minimal complications. The procedure was performed under general anesthesia.

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**Late degeneration (2015)**

**Vascular Surgery**

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**Short unibody device**

**Gore AFX**

23 x 60 x 40

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**Endologix AFX**

28 x 60 x 40

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**Hypogastric preservation**

**Gore iliac extension**

20 x 135

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**Viabahn**

13 x 100
Kissing stent technique

Completion and six months

Stable proximal aorta

Short term results

Single lumen abdominal aorta

- Fours days in hospital
  - Mild ATN (1.0 – 1.3 mg%)  
  - Normal appetite/exercise tolerance 
  - Right femoral lymphocele 
  - Return to work 5 weeks after surgery 
  - F/u CTA @ 1 & 6 months
Patent hypogastric arteries

Endoluminal septotomy for late AAA
- Acute and chronic applications
- Alternative to septal resection/open repair
- Single-lumen for distal disease management
- Limitation – fate of proximal aorta