Value Of Vascular Plugs In The Treatment Of Residual Aneurysms After Open And Endovascular Procedures

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Disclosures

• None

Various described clinical applications of vascular plugs

• Arterial Embolization
• Internal Iliac Artery aneurysm embolization
• Endoleak:
  – Type I A: Gutter leak
  – Type I B: IIA in progressive disease following EVAR
  – Type II: SCA, Lumbar A, IMA
• Ligature leaks
• Post dissection Aneurysms

Case 1

• 36-year male
  – Recurrent episodes of hemoptysis x 2 months
  – Hoarseness followed by Loss of voice x 2 months
• Past H/O
  – Dacron patchplasty for Coarctation of aorta at the age of 23
  – Ruptured pseudo aneurysm of the patchplasty site after 9 years
• Emergency thoracotomy with
  • Left lung upper lobectomy
  • Ascending aorta to descending aorta bypass (24 mm Dacron graft),
  • Ligation of aorta distal to left common carotid and at the descending thoracic aorta

• Emergency thoracotomy with
  • Left lung upper lobectomy
  • Ascending aorta to descending aorta bypass (24 mm Dacron graft),
  • Ligation of aorta distal to left common carotid and at the descending thoracic aorta
  • Recurrent Haemoptysis in 2 months
Emergency CT Angiogram

Case 2
1 year follow up following TEVAR + Left CCA- SCA bypass.
Type I / Type II leak/expanding TAA

2 years FOLLOWUP CT SCAN
Comparison of outcomes with coils versus vascular plug embolization of the internal iliac artery for endovascular aneurysm repair.

**Coil Vs Plug**

**Cons**
- Thrombogenic
- Smaller vessel
- No delivery device length constrains

**Pros**
- Negotiability in tortuosity
- Thrombus formation
- Delivery catheter constrains

**Plugs**

**Pros**
- Non Thrombogenic
- Delivery catheter constrains

**Cons**
- Difficult in tortuous vessels
- Often required multiple

**Conclusions**

- Vascular Plugs are most valuable for sealing spaces
- Have a long term role in “spot fixing” limitations/ complications encountered in Endovascular aneurysm repair.