WELCOME *To the*

2026 SYMPOSIUM

Surgical and Endovascular Management of Pseudoaneurysms in AV Grafts

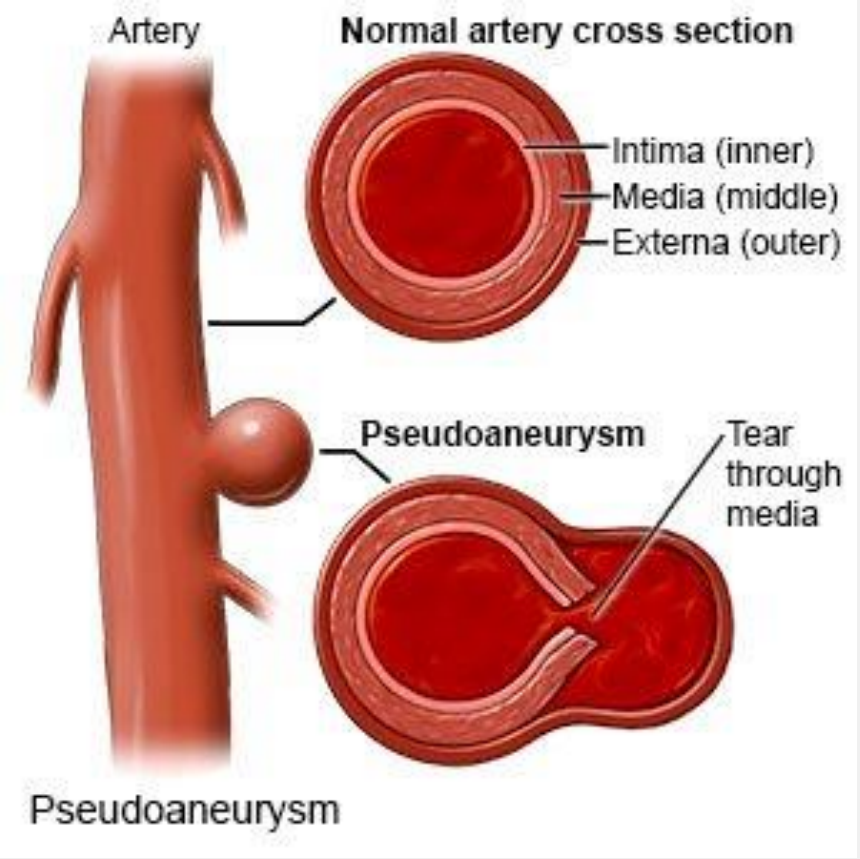
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Disclosure

Site Principal Investigator: Humacyte, Xeltis, W.L. Gore

Definitions

- False (or pseudo) aneurysms in AV grafts
  1. Contained rupture or leak outside of the AV grafts
  2. Hematomas communicating with the lumen of the AV grafts
  3. May develop a fibrotic sac without endothelium/vascular wall structure
  4. May rupture or result in catastrophic hemorrhage

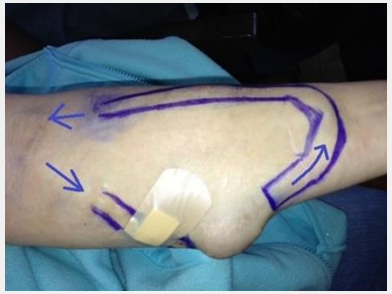


Etiology & Indications for Management

- <u>Location Dependent</u>
  1. At the anastomoses of AV grafts
     - ✓ Technical error (early)
     - ✓ Infection (late)
  2. Sites of needling/puncture along the length of AV grafts
     - ✓ Prolonged bleeding (pressure)
     - ✓ Back-walling
     - ✓ Graft breakdown
       - i. Repeated trauma (localized)
     - ✓ Venous outflow stenosis

- <u>Urgent</u>
  1. Uncontrolled bleeding
  2. Compromised skin, erosion
  3. Rapid enlargement
  4. Suspected infection
- <u>Non-urgent</u>
  1. Cannulation difficulty
  2. Pain, disfigurement, quality of life
  3. Large, non-resolving

Surgical Management





- At the anastomoses of AV grafts
  1. Technical error (early)
     - ✓ Repair/Redo
     - ✓ Prevent local complications
  2. Infection (late)
     - ✓ Removal of infected graft
     - ✓ Reconstruction of native vessels (harvested vein patch angioplasty)
     - ✓ Prevent rupture, hemorrhage

- Sites of needling/puncture
  1. Non-infectious etiology
     - ✓ Resection of PSA, Repair
     - ✓ Interposition bypass
  2. Localized infection
     - ✓ Excision of affected area
     - ✓ Repair with biological graft

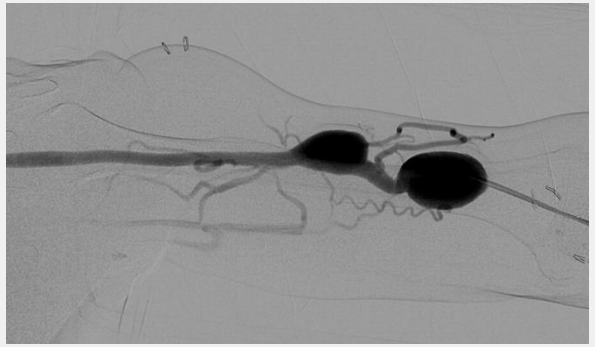
- Often requires placement of a catheter as a bridge until graft is ready for use

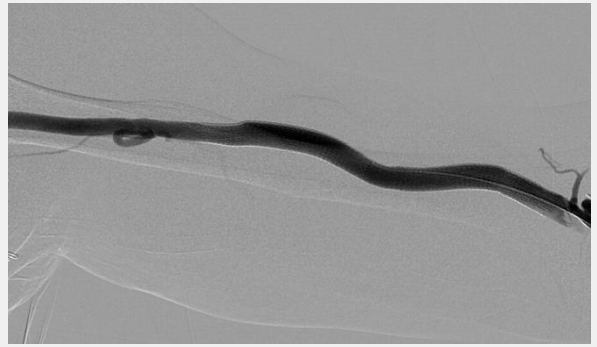
Endovascular Management

- <u>At the anastomoses of AV grafts</u>
  1. No good options esp. if infection suspected

- <u>Sites of needling/puncture</u>
  1. Stent graft exclusion (covered stent)
     - ✓ Temporary – Revision mandatory?
     - ✓ Permanent - Cannulation across the stent graft
  2. Risk of infection/thrombosis

- Permits continuous use of the AV grafts without the need of temporary catheter placement
- No large incision
- Can be done outside the OR
- Allows assessment/intervention of outflow stenosis





Surgery vs. Endovascular?

- Surgical and endovascular management may be reasonable in the appropriate settings
    1. Presence of infection may dictate surgical vs endovascular management
    2. Perianastomotic PSAs generally require surgical repair

- Endovascular repair is effective and may obviate the need for catheter placement as well as outflow assessment/intervention

- Communication with dialysis access center is important
    1. Urgent vs non-urgent intervention
    2. Appropriate cannulation location

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