Treatment Of Embolic Complications Of Peripheral Interventions: It Is Not Just The Clot Which Must Be Removed: Value Of Suction Techniques And Devices

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Disclosures
• None

Embolic complications
• Thrombo-embolic
• Plaque embolism

Treatment options
• Catheter directed thrombolysis (urokinase/rtPA)
• Aspiration thrombectomy
  – Diagnostic catheter/guiding catheter
  – Aspiration catheters (Vac Lock/Indigo)
• Mechanical thrombectomy
  – Aspirex
• Pharmacomechanical
  – Angiojet, EKOS, etc.
• Open surgery
  – Fogarty embolectomy

Aspiration thrombectomy/suction thrombo-embolectomy
• Change introducer for sheath with detachable valve/Touhy (avoid loss of thrombus that protrudes beyond the tip of the catheter)
• Vac-Lock syringe/Penumbra vacuum pump
• Large vessels (iliac/femoral/popliteal)
  – Guiding catheter (5-9F)
  – CAT 5-8
  – Telescoping technique (avoid dissection)
  – NB positioning with guidewire, suction without guidewire
• Small vessels (distal popliteal/BTK)
  – Single-end hole diagnostic catheter (4-5F)
  – CAT 3
  – Aspiration catheters (coronary; Rx guidewire left in place)

Aspiration thrombectomy
Limitations of 'low end' technology

- High thrombus volume
- Organized material

Case #1

Acute stent occlusion (1 week old, acute symptoms)

Aspiration (CAT 6)

PTA with DEB (5 x 150 mm)
Case #2

Distal bypass, after 2 months of anticoagulation therapy

After CAT 3 distally

5 F sheath, CAT 5

After CAT 5
Case #2

Conclusions

- Prerequisites for optimal aspiration
  - Large lumen, flexible catheters that do not collapse
  - Sufficient vacuum
- This allows aspiration of
  - Large volume thrombus
  - Organized material