Technical Tips, Pitfalls And Midterm Results With Pedal Access Procedures
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Disclosures

- Have no disclosures related to this subject.

Retrograde Pedal Access

- Retrograde pedal/tibial recanalization is a relatively new modality performed for LE revascularization.
- The technique was first described by Iyer et al., 1990 after failed antegrade tibial recanalization.
- First described using open access via foot or distal leg incision.

Indications

- 10 – 20% of the time, we are not successful in recanalizing the occlusion in the usual antegrade way.
- Other times, femoral access is not possible
  - Recent groin surgery
  - Open groin wounds
  - Groin infections

Current Literature on the retrograde pedal/tibial approach for treating complex thigh inclusive disease.

<table>
<thead>
<tr>
<th>Series</th>
<th>Number</th>
<th>Indication</th>
<th>Vessel Assessed</th>
<th>Technical/VA complication</th>
</tr>
</thead>
<tbody>
<tr>
<td>Iyer et al. (1990)</td>
<td>8</td>
<td>TA/U/FA</td>
<td>A2</td>
<td>5/5 (100%)</td>
</tr>
<tr>
<td>Pavone et al. (2005)</td>
<td>1</td>
<td>TA/U</td>
<td>A2</td>
<td>3/3 (100%)</td>
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<td>Lipton et al. (2007)</td>
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<td>TA/U</td>
<td>A2</td>
<td>3/3 (100%)</td>
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<tr>
<td>El Sayed et al. (2013)</td>
<td>11</td>
<td>TA/U</td>
<td>A2</td>
<td>11/11 (100%)</td>
</tr>
</tbody>
</table>


El Sayed H F, Retrograde Pedal/Tibial artery access for treatment of infragenicular arterial occlusive disease, Methodist Debakey Cardiovasc J, 2013

### Technique

- Access of the vessel
- Crossing the lesion
- Treating the lesion

**Technique**

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**Cook Medical Micropuncture® Pedal Access Set**
Usually 0.018" system (V-18™ ControlWire® Guidewire, Boston Scientific®)

Sometimes 0.014" system (V-14™ ControlWire® Guidewire, Boston Scientific®, other 0.014" system crossing wires)

Rarely 0.035" system (Glidewire®, TERUMO INTERVENTIONAL SYSTEMS)
Our Experience

- Retrospective chart review of all retrograde tibial intervention cases between 2011-2014
- 21 patients
- 16 males and 5 females.
- All patients had CLI (Class 4-6)
- All patients had previous failed antegrade recanalization attempt.

RESULTS

Patient Demographics

- CKD (Stage 2-5)
- ESRD
- Tobacco Use
- DM
- CAD
- Dyslipidemia
- HTN
- Male

- Mean age 68 ± 11.3 years

- Technical Success in 14 patients (67%)
- All lesions were angioplastied. 2 lesions were stented
Results

- Mean follow-up time 9.1 months

Adverse Events

- 2 access site hematomas, 1 brachial, 1 femoral.
- No 30-day mortality or major adverse cardiac event
- No pedal access site complications

Primary Patency

Limb Salvage

Conclusions

- Endovascular retrograde revascularization is a safe procedure
- Mid-term patency is acceptable, and rate of limb salvage is high
- Satisfactory for healing of ulceration, dry gangrene, and surgical wounds
- This procedure proves to be a suitable adjunctive technique for patients with failed conventional antegrade endovascular interventions.
Thank You