Treatment options for critical hand ischemia: a single center experience

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I have the following potential conflicts of interest to report: consulting, travel reimbursement, teaching courses, training, proctoring:

Medtronic, Boston Scientific, Abbott, LimFlow, Terumo, Cook, Biotronik, Asahi, Shire, Kardia, Orbus
Percutaneous Transluminal Angioplasty for Treatment of Critical Hand Ischemia

Angioplasty of Below-the-elbow Arteries in Critical Hand Ischaemia

Radiological anatomy of upper limb arteries and their anatomical variability: implications for endovascular treatment in critical hand ischemia

Chapter 13
Below the Elbow Occlusive Disease

First use of drug-eluting balloon for below-the-elbow artery occlusion in a hemodialysis patient: a 3-year follow-up
Treatment options for CHI: a single center experience

<table>
<thead>
<tr>
<th>Condition</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>ESRD-HD</td>
<td>142 (76%)</td>
</tr>
<tr>
<td>Other</td>
<td>44 (24%)</td>
</tr>
<tr>
<td>Buerger</td>
<td>6</td>
</tr>
<tr>
<td>TOS</td>
<td>2</td>
</tr>
<tr>
<td>Radial access complication</td>
<td>2</td>
</tr>
<tr>
<td>Inflammatory diseases</td>
<td>32</td>
</tr>
<tr>
<td>Embolization</td>
<td>2</td>
</tr>
</tbody>
</table>
1. Angioplasty

2. Bypass

3. Thoracic sympathectomy

4. Renal transplant
Patient 1

- 50 yy old male, T1DM, ESRD-HD
- 2 AVF for HD (dist + prox) not functioning
- Fingers gangrene
Occluded proximal termino-lateral radio-cephalic AVF
Distal latero-terminal, still open but not-functioning AVF

Occluded proximal termino-lateral radio-cephalic AVF
Distal latero-terminal, still open but not-functioning AVF

Occluded proximal termino-lateral radio-cephalic AVF

Occluded ulnar artery
Embolization with coils of the distal AVF
Patient 2

- 81 yy, female
- Connective tissue disorder
- Pain at rest & finger lesion
1. Angioplasty
2. Bypass
3. Thoracic sympathectomy
4. Renal transplant
Patient 3

- 79 yy, male
- T2DM, ESRD-HD
- Pain at rest & fingers amputation
1. Angioplasty
2. Bypass
3. Thoracic sympathectomy
4. Renal transplant
Patient 4

- 47 yy, female
- Multiple myeloma with amyloidosis
3 months later…
3 yy after endoscopic thoracic sympathectomy → no pain, no lesion, functioning hands, stable
1. Angioplasty
2. Bypass
3. Thoracic sympathectomy
4. Renal transplant
• 2009 → 36 yy old female
• T1DM
• ESRD-HD
• Fingers amputation, Chopart & BTK amputations

• Despite this dramatic clinical stage she got a double kidney + pancreas transplant on 2010
• 2018 → 45 yy old
• Summer walking in the mountain → “new leg prostheses are formidable”
• Driving car
• Totally independent, active life
Patients with CHI have different pathophysiology and different underlying diseases

Try to find for everyone the proper solution
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