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Pioneering technique for chronic critical arm ischemia

HUMANITAS
GAVAZZENI

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Disclosure

Roberto Ferraresi, MD

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
Pioneering technique for chronic critical arm ischemia

1. Basal technique:
   - 4F antegrade humeral approach
   - 0.014" hydrophilic wires
   - intra-arterial 50 mg lidocaine before balloon inflation
   - Long, low profile balloon

2. Accessory techniques:
   - Retrograde puncture
   - Subintimal approach
   - DEB treatment
Antegrade brachial approach is sometimes difficult due to high bifurcation of below-the-elbow arteries
High origin of the interosseous artery
• 73 yy old woman, 46 Kg x 163 cm

• 1994 Sjogren syndrom, Raynaud phenomenon, Horton arteritis

• 2013/12 Unstable Angina PTCA → right radial artery

• 2014/7 referred to our center
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Patient 3

- 54 yy, male
- Type 1 DM
- ESRD-HD
- Presentation: 5° finger gangrene
Basal

Primary UB-PTA

2 months restenosis

DEB-PTA for restenosis
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• 52 yy, male
• Type 1 DM
• ESRD-HD
• 2° finger gangrene
3 months later
Every endovascular technique can be used in critical hand ischemia, however....

1. **Below-the-elbow vessels are very fragile, vessel rupture is frequent:** be delicate, do not oversize balloons!

2. **Subintimal space is absent:** I was able to find it only in two case (reocclusion)

3. **DEBs seem to be promising,** however it is difficult to obtain a proper follow up in pts presenting a 40-50% mortality rate at one year!

4. **Hand vessel disease is the the final determinant of untreatedable finger ischemia**
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