Below The Ankle And Perimalleolar Occlusive Disease With CLI: Tips And Tricks For Treating It Endovascularly And When They Should Be Used: Hydrodynamic Boost To ReEnter The Tibial Artery True Lumen And Venous Arterialization

Disclosure

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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

1. Antegrade femoral approach is the only possible approach in foot vessel treatment
2. Hydrodynamic boost to reenter the true lumen
3. Untreatable BTA vessel disease with bad run off in small vessels: what can we do?

Antegrade femoral approach

Radial, humeral and contralateral approaches cannot give a complete devices control

Impossible to treat foot vessels properly

Antegrade femoral approach

We started antegrade femoral puncture as first choice approach in below-the-groin vessel disease in 2000. In the very first 1012 cases (2000-2008), we had 27 major complications (2.7%)
Learning curve: from 9% complication rate to <2%

What were the key points in reducing complications?

1. Standard use of 4-5 F sheaths
2. X-ray guided puncture

Antegrade femoral approach complications (2000-2008; 1012 procedures)

Antegrade femoral approach complications according to sheath size (2000-2008; 1012 procedures)

Danger of retroperitoneal, abdominal wall and external genital bleeding

The antegrade femoral puncture can be in the CFA or in the proximal SFA without an increase in morbidity.

Danger of thigh hematoma or pseudoaneurism

1st key factor in reducing complications: 4-5 F sheath puncture

2nd key factor in reducing complications: X-ray guided puncture

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Hydrodynamic boost: a novel re-entry technique in subintimal angioplasty of below-the-knee vessels

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HB is an option to use in very particular cases where the success can be achieved also with standard techniques. However it is useful to demonstrate that:

1. Subintimal space is not one! It is a “family” of anatomical planes with different physical properties and it is essential in subintimal angioplasty to be able to recognize these properties
2. Only a high volume center can guarantee a deep knowledge of every possible approach in distal CTOs

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Conclusion

"On the basis of limited evidence, surgical venous arterialization may be considered as a viable alternative before major amputation in patients with 'inoperable' chronic critical leg ischaemia"