SFA OCCLUSIONS - IS AHERECTOMY SUPERIOR?

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Disclosure

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I have the following potential conflicts of interest to report:

- Consulting
- Employment in industry
- Stockholder of a healthcare company
- Owner of a healthcare company
- Other(s)

I do not have any potential conflict of interest
Atherectomy is a minimally invasive surgical method of removing, mainly, atherosclerosis from a large blood vessel within the body. Today, it is generally used to effectively treat peripheral arterial disease of the lower extremities.

UNIQUE SFA

• Superficial femoral artery (SFA) disease problems and hurdles:
  • Lesions—typically long (thus implying a high plaque burden)
  • Highly calcified
  • Because of the extensive calcification expansion stents and balloons can be problematic, leading to poor vessel wall apposition.
DEB & DES

Presence of calcification and the high plaque/thrombus burden may inhibit drug uptake and limit the biological effect of paclitaxel from DCBs.

During passage of the balloon through the diseased arterial system some drug is lost.

Bailout use of self-expanding stents after unsuccessful balloon angioplasty may have a negative influence on the long-term patency rates because the stents will exert a chronic outward pressure on the vessel wall.

Stent-mediated drug releases the drug only at the level of contact of the stent struts with the vessel wall.
STENTS

Stenting for steno-occlusive disease of the SFA has improved the midterm outcomes as compared to balloon angioplasty. long-term problem- a relatively high percentage of patients presenting with in-stent restenosis
LITERATURE REVIEW:

- Directional atherectomy is safe & effective at 12 months:
- Effective for short, medium and long lesions.
- 83% SFA (4-10cm).
- 78% Infra-popliteal (6.0cm)
- 95% Limb Salvage in CLI patients

Andrew J.P. Klein, MD; *J Am Coll Cardiol Intv.* 2014;7(8):934936.doi:10.1016/j.jcin.2014.05.007

**Atherectomy combined with DEB has shown better results:**

- Debulking
- Creating conducive environment for optimal drug delivery
- leaving nothing behind
ATHERECTOMY  PTA  STENT  BYPASS

PRESERVES TREATMENT OPTIONS / LESS INVASIVE

IRREVERSIBLE / DECREASES TREATMENT OPTIONS
Atherectomy

- Not a “final” therapy
- Can tackle calcified/complex stenosis
- Preserves collaterals and side branches
- Can be combined with other therapies
- Reduces the likelihood of bailout stenting and will preserve the native vessel (keeping future treatment options, both endovascular and surgical, open).

- Allows balloon angioplasty to be performed at a low pressure, reducing the barotrauma.
- Allows for a drug concentration that is highest at the time of the vessel wall dilatation.
Conclusion

• Recent advances - high success rates
• *Durability, long term patency – to be seen*
• *Overcomes limitations of PTA/stenting*

*DOESNT LEAVE BEHIND RESIDUAL DISEASE*
THANKYOU

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