First experience with DCB for treatment of dialysis access stenosis: The Belgian experience

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Disclosure

Speaker name:
Geert Maleux.............................................................................

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)

x I do not have any potential conflict of interest
Introduction

✓ Balloon angioplasty well-accepted endovascular treatment modality for venous outflow stenoses in dysfunctional native hemodialysis fistulae.

✓ Moderate to poor (primary) patency rates
  ✓ Primary patency rates : 26% - 48%
  ✓ Primary assisted patency : 80%

✓ Repetitive endovascular interventions may alter quality of life

• Heye, Maleux et al. Eur J Radiol 2012
• Rajan et al. Radiology 2004
DCB technology

- DCB: superior to conventional angioplasty balloons
- In lower limb vessel interventions
- Dysfunctional dialysis grafts

- Katsanos et al. J Endovasc Ther 2012
Study design

✓ Prospective, multicentre, randomized study
✓ Paclitaxel-eluting angioplasty-balloon (In.Pact Admiral, Medtronic, Minneapolis, MI, USA) versus conventional angioplasty balloon (Admiral Extreme, Medtronic)
✓ Native AV fistula
✓ Hemodialysis access dysfunction
✓ Efferent vein stenosis (from surgical anastomosis up to the SVC)
✓ Stenosis > 50%
✓ Efferent vein below & above stenosis > 4 mm
✓ Technique
  ✓ DCB angioplasty (5-7 mm diameter) : inflation time 2 min + conventional angioplasty balloon if > 7 mm diameter (if needed)
  ✓ Conventional angioplasty balloon : inflation time 2 min.
Study design

- **Primary endpoints**: primary, primary-assisted and secondary patency rates at 3, 6 and 12 months of follow-up (efficient dialysis session as defined by NKF-DOQI-protocol criteria)

- **Secondary endpoints**:
  - Technical success of DCB-angioplasty (< 30% residual stenosis; clinically clear thrill efferent vein)
  - Procedure-related adverse events of DCB-angioplasty
Hypothesis

• Repetitive punctures (dialysis session)
• High pressure in efferent vein (arterialized vein)
• Intimal hyperplasia
• DCB : paclitaxel release
• Thank you for your attention

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