The Clinical Impact of Restenosis After Angioplasty and Stenting For Femoropopliteal Occlusive Disease

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Proctor/trainer
- Abbott Vascular
- COOK
- GORE
- Medtronic
- Philips (Volcano)
- Spectranetics

Advisory board
- Abbott Vascular

Stock holder
- Therapeutics
- Profusa

Research
- Phillips (Volcano)
- Mercier
- Vetoryl

Inpatient Vascular Procedures

National Hospital Discharge Survey

Inpatient Procedures per 100,000

- Leg
- Carotid
- AAA
- Renal-Mes
- Catheter Interventions 100% Increase

Procedures per 100,000


SURVEILLANCE PROTOCOL

Initial duplex scan within 2 weeks
NORMAL
3 months
Every 6 months (2 times/year)

ABNORMAL

Recurrence of proximal reintervention
Repair

METHODS:

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- METHODS:

- Retrospective review (1 January 2009 – 31 December 2013) at a single academic institution

- Demographic, clinical, outcomes and surveillance data were abstracted from detailed chart review.

- Exclusion criteria:
  - Patients who had undergone previous lower extremity vascular interventions.
  - Those with inadequate surveillance (minimum of 2 post-intervention studies).
DEFINITION OF IN-STENT RESTENOSIS

- > 50% ISR was defined by one or more of the following criteria:
  - Peak systolic velocity (PSV) > 190 cm/s or <45 cm/s
  - Velocity ratio (VR) > 1.5

- > 80% ISR was defined by one or more of the following criteria:
  - PSV > 275 cm/s
  - VR > 3.5
  - Undetectable signal was graded as complete occlusion

- Target lesion was defined as the stented segment from 10 mm proximal to 10 mm distal.

Baril et al; JVS 2009 Jan 1;49(1):133–9.

OUTCOMES & STATISTICAL ANALYSIS

- Define outcomes (e.g. MALE)
- Demographics and clinical data were compared via variances (ANOVA).

DEFINITION OF MALE (MAJOR ADVERSE LIMB EVENT)

- Above ankle amputation
- Major reintervention
  - new bypass graft,
  - jump/interposition graft revision,
  - or thrombectomy/thrombolysis


DEMOGRAPHICS:

- Mean age = 69.1 ± 10.7 years.
- 62.5% (n=75/120) were male
- No demographic differences regarding presence/absence of
  - Tobacco smoking
  - Diabetes mellitus
  - Hypertension
  - Hyperlipidemia
  - CKD Stage 5
CONCLUSION

- Lack of a standardized protocol for surveillance
- < 80% ISR appears fairly benign and can be safely followed in patients without symptoms
- ISR >80% predicts adverse limb events.

Question:
- Prophylactic reintervention based on duplex surveillance independent of symptoms should be considered in this subgroup?

LIMITATIONS:

- Retrospective nature of study.
- All comers (different lesions, different stents, etc)
- Small sample size.
- Low statistical power.