DIRECTIONAL Atherectomy for the Treatment of Recurrent Distal Anastomotic Stenosis of Aortobifemoral Bypass

Eric C. Scott, MD
Department of Vascular Surgery
The Iowa Clinic
West Des Moines, Iowa, USA
Disclosure

I have the following potential conflicts of interest to report:

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

- I do not have any potential conflict of interest
AORTOBIFEMORAL BYPASS OUTCOMES

355 aortoiliofemoral bypass procedures

5 Year Primary Patency: 85%

Limb Occlusion: 10%

Outflow Stenosis: 5%

50 yo Female with Recurrent R Leg Claudication

2002 – Coarctation repair with infrarenal aortic tube graft at outside hospital

2005 – Thoraco-L femoral bypass and femoral-femoral bypass

2008 – R femoral endarterectomy, revision of distal anastomosis
50 yo Female with Recurrent R Leg Claudication

2009 – Revision of thoracofemoral bypass, ligation of femoral-femoral bypass for recurrent R femoral anastomotic stenosis

2011 – Recurrent claudication and R femoral stenosis
(6mm cutting balloon angioplasty)

2012 – Recurrent R femoral stenosis and 1-block claudication
* Arterial duplex – PSV 440cm/sec
* ABI 0.80
RIGHT FEMORAL ANGIOGRAM

LEFT GROIN GRAFT ACCESS

RIGHT LIMB OF AORTOBIFEMORAL BYPASS

RIGHT EXTERNAL ILIAC ARTERY
DIRECTIONAL ATERECTOMY

TurboHawk LX-M

- 6mm Spider Filter
- 16 Concentric Passes
- 6mm x 40mm Final PTA

INITIAL
DIRECTIONAL ATERECTOMY

- TurboHawk LX-M
- 6mm Spider Filter
- 16 Concentric Passes
- 6mm x 40mm Final PTA

INITIAL
DIRECTIONAL ATERECTOMY

- TurboHawk LX-M
- 6mm Spider Filter
- 16 Concentric Passes
- 6mm x 40mm Final PTA

INITIAL
**Directional Atherectomy**

- **Initial**
  - TurboHawk LX-M
  - 6mm Spider Filter
  - 16 Concentric Passes

- **Final**
  - 6mm x 40mm Final PTA
3-Year Follow-Up

Claudication Resolved

ABI 0.98

Arterial Duplex Velocity
155 cm/sec

38 Month Follow-Up Angiogram
**CONCLUSIONS**

Directional Atherectomy Can Be Used To Emulate Surgical Endarterectomy With Less Impact on Media, Adventitia

Cases Such As These Suggest Such An Approach May Reduce Intimal Hyperplasia

38 Month Follow-Up Angiogram
DIRECTIONAL ATERECTOMY
for the Treatment of Recurrent Distal Anastomotic Stenosis of Aortobifemoral Bypass

Eric C. Scott, MD
Department of Vascular Surgery
The Iowa Clinic
West Des Moines, Iowa, USA