Initial real-world experience with absorbable stenting for tibial disease

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Disclosure

I do not have any potential conflict of interest

No financial interests related to this discussion.
Defines a new paradigm - Vascular Reparative Therapy VRT. Designed to restore the vessel to a more natural state (Making natural vascular function possible).

Stenting performance by a single phase of revascularisation.

The premise of working in three phases to deliver VRT:
- Revascularisation
- Restoration
- Resorption
BVS Bioresorbable Vascular Scaffold

- PLLA polymer scaffold a **poly(D,L-lactide)** coating.
- And the antiproliferative drug **everolimus**.
- **Everolimus** effectively to be safe:
  - Inhibits neointimal hyperplasia.
  - Enhances **remodeling**.

- **BVS** to maintain (structure and strength) full 6-month.
This is already proven where **optical coherence** tomography images after 6 and even 12 months showed full preservation of the scaffold area without any shrinkage.
- **3-year** follow-up now shows very encouraging results in this field.


Textbook by Davies MG and Lumsden AB (editors):
the SFA: contemporary endovascular management. In press
Polymer resorption in the long-term: little inflammation in preclinical models, generally seen as a passive, late-term process.
Evaluating BVS:
Midterm follow-up is anticipation of returning to the natural biomechanics of the vessel as the device degrades and resorbs is essential in this concept.

**Drug elution:** Effect on the vessel wall will also gradually stop in this time frame.


Technical success, residual stenosis, primary patency, limb salvage and clinical success at within acceptable ranges, angiographic patency at 12 months.

Why like it ........
- Drug – eluting property
- Low-radial force
- No permanent implant
- Short lengths and small diameters.
- Mainly spot tibial lesions.

Available Everolimus Drug Coating
Bioresorbable scaffold that starts disintegrating at 9 months and completely disappears after 2 years

- BVS to maintain (structure and strength) full 6-month.
New Treatments
Improved patency for proximal and distal lesions

<table>
<thead>
<tr>
<th>Drug-Eluting Balloon</th>
<th>Drug Eluting Stent</th>
<th>Bioresorbable Stents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drug Delivery</td>
<td>Drug Delivery</td>
<td>Drug Delivery</td>
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<tr>
<td></td>
<td>Supports Vessel During Healing</td>
<td>Supports Vessel During Healing</td>
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<tr>
<td>No Permanent Implant</td>
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<td>No Permanent Implant</td>
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</tbody>
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The 4th Revolution in Interventional device is a Bioresorbable Vascular Scaffold (BVS) Comprised of four key design elements: a bioresorbable scaffold, a bioresorbable coating, everolimus and the delivery system.
First Case of Critical ischemia
82 year old men with ulcer of the first nail right foot post resection
Open access retrograde for ATA pedia
Anterior tibial artery is open by balloon technique.
Balloon angioplasty only pedia artery and anterior tibial artery
BV Scaffold 2.5 for 28 mm
BV Scaffold 2.5 for 28 mm
Follow up
(15 Months) 28 Oct 2013 - 21 Jan 2015
Second Case

63 years old, diabetic foot wagner II, and left tibial anterior artery stenosis (70-80%) 

Fever and plantar edema of the left lower limb
Second Case

63 years old, diabetic foot wagner II, and left tibial anterior artery stenosis (70-80%)

Fever and plantar edema of the left lower limb
Second Case
Follow up (16 Months) from 17 July 2013 at 19 Jan 2015
Second Case
Follow up (16 Months) from 08 July 2013 at 19 Jan 2015
Third case
Female patient 62 year old, with critical limb ischemia
ABI 0.33 Rigth (ATA)
Third case

Female patient 62 year old, with critical limb ischemia
ABI 0.33 Right (ATA)
Third case
Female patient 62 year old, with critical limb ischemia
ABI 0.33 Right (ATA)
Third case
Female patient 62 year old, with critical limb ischemia
ABI 0.33 Rigth (ATA)
- Resorption will force us to redefine concepts
- Percentage stenosis or late lumen loss, when the frame of reference (the original device diameter) has disappeared.
- Additional and complementary space in our endovascular armamentarium of tomorrow.
- In short lesions, below-the-knee areas.
- Temporary scaffolding solution after atherectomy.

"A temporary solutions for a temporary problem".
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