Insights into the pathophysiology of thrombus: Why is clot removal so difficult?

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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
Great hope for Stent-graft in Complex FP lesions (1)

GORE® VIABAHN® Endoprosthesis:
12-Month results of the Japanese IDE Trial

Subjects: 103 PAD patients
Lesion Length: 21.8 cm, CTO: 65.7%, TASC C,D: 84.5%


Courtesy of Dr. Soga
Endovascular Treatment of Severely Calcified Femoropopliteal Lesions Using the “Pave-and-Crack” Technique: Technical Description and 12-Month Results

Conclusion: Despite severe lesion calcification, patients experienced high technical success and a safe and durable therapy at midterm follow-up with the femoropopliteal “pave-and-crack” technique.

Femoropopliteal artery stent thrombosis report from the excellence in PAD registry

<table>
<thead>
<tr>
<th>Stent</th>
<th>Thrombosis (%)</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>BMS (n=446)</td>
<td>3.4</td>
<td>0.54</td>
</tr>
<tr>
<td>DCS (n=68)</td>
<td>4.4</td>
<td>0.31</td>
</tr>
<tr>
<td>Supera™ (n=43)</td>
<td>7</td>
<td>0.02</td>
</tr>
<tr>
<td>Viabahn™ (n=47)</td>
<td>10.6</td>
<td></td>
</tr>
</tbody>
</table>

Case 60’s year-old-male

Chief complain
Intractable rest pain

Past medical history
HTN, DL, ESRD on dialysis

Present illness
60’s year old male with history of stentgraft treatment
2-month before was emergently admitted to our hospital with acute onset of intractable rest pain caused by acute limb ischemia due to stent thrombosis.
Previous treatment (2-month before)

Initial angio  
Viabahn 6.0*250 mm, 6.0*100 mm  
Final angio
Initial angiography
Surgical thrombectomy (1)

0.018 inch 5mm Over-the-wire Fogarty catheter

Macrophages and multinucleated foreign body giant cells were observed.
Surgical thrombectomy (2)

0.025 inch 9mm Over-the-wire Fogarty catheter
Surgical thrombectomy (2)
Surgical thrombectomy (2)

Macrophages and multinucleated foreign body giant cells were observed.
Clinical scenario

✓ After fogarty catheter treatment, symptom was dramatically disappeared without any complication.

✓ Dual antiplatelet therapy (DAPT) with intravenous heparin administration was continued for preventing thrombotic re-occlusion.

✓ Value of PRU (P2Y12 reaction units) was 135, which was sufficient platelet reactivity on clopidogrel.

✓ Unfortunately, 12 hours later, thrombotic re-occlusion was occurred, and we consult to vascular surgeon to consequently perform surgical femoropopliteal bypass surgery using saphenous vein graft.
Learn from this case

Pathology:  **Fibrin** with macrophages and multinucleated foreign body giant cells

Medication use: **DAPT**  
(Aspirin+clopidogrel [PRU value: 135])

- ST occurred with the adequate DAPT effects according to the PRU value, speculating DAPT may be insufficient to prevent ST.
- The use of antithrombotic drugs, including **direct oral anticoagulants (DOAC)** should be reconsidered to maintain patency after Viabahn™ stent-graft implantation.
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