CHRONIC POPLITEAL OCCLUSIONS: CAN MECHANICAL DEBULKING REDUCE THE STENT LENGTH AS WELL AS THE NUMBER OF IMPLANTED STENTS?

M. Bulvas, Z. Sommerová

Interventional Angiology Division, King’s Vineyards Hospital, Charles University

PRAGUE
Disclosure

Speaker name: Miroslav Bulvas

I have the following potential conflicts of interest to report:

- Consulting (Straub Medical)
- Employment in industry
- Stockholder of a healthcare company
- Owner of a healthcare company
- Proctoring (Straub Medical)
STENTS IN FEMOROPOPLITEAL ARTERIAL SEGMENT
ROTAREX EFFICACY

- Depends on the presence of fragmentable and removable occlusive material.

- Our hypothesis: fragmentable material exists in occlusions that can be easily passed with guidewire without respect to the age of ischemic symptoms.
MATERIAL AND METHODS

- Time interval: APR 2009 – FEB 2013
- Number of patients: 101 (52 m + 49 f)
- Age: 44 – 94 y. (mean 71)
- Popliteal artery occlusion 101 pts
- Adjacent femoral occlusion 12 pts
- Symptoms > 3 months 101 pts
MATERIAL AND METHODS

• Mean occlusion length: 13.2 cm (r. 4-35; SD 7.5)
• Mean age of symptoms: 6 mo (r. 4-14; SD 2.4)
• Ipsilateral, antegrade approach: 98 pts (97%)
  • 8F Rotarex 85 pts (84%)
  • 6F Rotarex 17 pts (17%)
POPLITEAL ARTERY OCCLUSION

(m, 64 yrs., 11 months symptoms)
POPLITEAL ARTERY OCCLUSION
(m. 66 yrs; 6 months symptoms)
POPLITEAL ARTERY OCCLUSION

(f. 86 yrs; 7 months symptoms)
RESULTS

- Recanalized: 101pts (100%)
- Rsd. stenosis 0 - 30% after Rtx: 54 pts (53%)
- Rsd. stenosis 0 - 30% after adjunctive ther.: 97 pts (96%)
- Adjunctive popliteal stenting: 25 pts (25%)
  avg. stented length (cm): 3.5 (SD, 5.8)
- Adjunctive PTA without stenting: 44 (44%)
- Therapy of additional lesions: 74 pts (73%)
"ANKLE-ARM" INDEX

(AAI; n=61, p<0.001)
OCCLUSION LENGTH vs. STENT LENGTH

(p<0.001)
## OUTCOMES

<table>
<thead>
<tr>
<th></th>
<th>30 Days</th>
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<th>12 Months</th>
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<tbody>
<tr>
<td></td>
<td>n (%)</td>
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<td>n (%)</td>
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<tr>
<td>Follow-up data available</td>
<td>101 (100 %)</td>
<td></td>
<td>62 (100 %)</td>
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<tr>
<td>Death</td>
<td>1 (1 %), PE</td>
<td></td>
<td>1 (1.6 %)</td>
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<tr>
<td>Restenosis</td>
<td>1 (1 %)</td>
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<td>8 (13 %)</td>
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<tr>
<td>Amput. Free Survival</td>
<td>99 %</td>
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<td>98 %</td>
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COMPLICATIONS

- serious
- minor

- periph. embol. after Rotarex 5 (5%)
- periph. embol. after PTA (stent) 10 (10%)
- groin hematoma 3 (3%)
- arterial perforation 3 (3%)
COMPLICATIONS
CONCLUSIONS

• With the Rotarex device, we have reestablished blood flow in 100% of popliteal occlusions.

• Stent implantation was not necessary in 75% of popliteal arteries after mechanical debulking.

• Mechanical debulking was used as the only endovascular therapeutic technique in 32% of patients.
Based on our results, Rotarex should be considered in patients with popliteal artery occlusions and chronic ischemic symptoms to avoid stent insertion in this challenging vascular location.
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