Long FP lesions with re-entery / retrograde approach
FEMORO POPLITEAL ARTERY RECANALIZATION

Endoluminal

Obstructions < 10 cm non-calcific

Subintimal

- Obstruction > 10 cm
- Endoluminal failure
- Calcifications
# Subintimal Angioplasty Fem - Pop

## Unfeasibility Rate

<table>
<thead>
<tr>
<th>Author</th>
<th>Rate</th>
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<tbody>
<tr>
<td>1. YILMAZ S</td>
<td>12%</td>
</tr>
<tr>
<td>2. SMITH BM</td>
<td>18% CLI</td>
</tr>
<tr>
<td>3. OSTRI CH</td>
<td>11%</td>
</tr>
<tr>
<td>4. SPINOSA DJ</td>
<td>14%</td>
</tr>
<tr>
<td>5. TREIMAN GS</td>
<td>10%</td>
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</tbody>
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Failure causes of an antegrade recanalization are different in function of the site:

1. **Proximal reasons**
   a. Non detectable origin
   b. Occlusion origins with collaterals and no stump

2. **Intermediate reasons**
   a. Vessel Rupture
   b. No progression of the recanalization devices

3. **Distal reasons**
   Impossible re-entery
1. Failure causes of an antegrade recanalization due to a proximal reason

a. Non detectable origin

In this situation we can only use the double approach technique

b. Occlusion origins with collaterals and no stump

In this situation we can only use the double approach technique
Recanalization of FEM POP CTO

Double Approach

Primary success rate: 55/56  98.2 %

The double approach technique is safe and feasible with a very high success rate, if performed by trained operators.

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3. Distal reasons
   Impossible re-entery
2. Failure causes of an antegrade recanalization: intermediate reason

a. Vessel Rupture

- First indication is ➔ perform a **double approach**

- Use **re-entery** catheters to perform an extra vascular road ➔ cost +++ (covered stent + device)
2. Failure causes of an antegrade recanalization: intermediate reason

b. No progression of the recanalization devices

Need to have in the arsenal of materials recanalization catheters, high support balloons, very low profile devices (0.014 ’’)

If failure → DOUBLE APPROACH
Failure causes of an antegrade recanalization are different in function of the site:

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2. Intermediate reasons
   a. Vessel Rupture
   b. No progression of the recanalizarion devices

3. Distal reasons
   Impossible re-entery
3. Failure causes of an antegrade recanalization: distal reason

Impossible re-entry

THE KEY POINT IS TO CROSS THE OCCLUSION

RE-ENTRY

DOUBLE APPROACH

ASSISTED RE-ENTRY

OUTBACK (CORDIS)  PIONEER (VOLCANO)  OffRoad (Boston Scientific)
Recanalization of FEM POP CTO

OUTBACK REENTERY SYSTEM

3 large mono center papers published

Technical Success

- Study 1: 57/65 (88%)
- Study 2: 49/51 (96%)
- Study 3: 108/119 (91.5%)

Is it suitable to use the device in an antegrade approach and pre dilate the subintimal space before introducing the OUTBACK catheter

Alsam et al. Cath Cardiovasc Intervent 2010 sept 7
Bausback et al. JEV 2011
Recanalization of FEM POP CTO

PIONEER CATHETER

IVUS guided reentry device

21 G Needle

6 FR Compatible
Recanalization of FEM POP CTO

Off Road Re-entery Catheter System
Conclusions

• In long FP occlusions we need to manage the double approach technique to increase the technical success rate.
• In proximal and intermediate failure of antegrade approach we essentially use the double approach technique.
• In the distal failure of antegrade recanalization we can decide to use or a double approach or a re-entery device.
• The use of a re-entery device is expensive and not always faster, it can help operators that begin complex CTO recanalizations.