ENDOVASCULAR VS OPEN SURGERY OF SUPERFICIAL FEMORAL ARTERY DISEASE

THE ZILVER PASS TRIAL

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CONFLICT OF INTEREST

- 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 conflicts of interest to report

BYPASS IS THE GOLDEN STANDARD IN TASC C&D LESIONS

<table>
<thead>
<tr>
<th>Author(s)/Yr</th>
<th>Type of Study</th>
<th>Study Population</th>
<th>Primary patency</th>
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</thead>
<tbody>
<tr>
<td>Hines/2010</td>
<td>Retrospective</td>
<td>27 patients with TASC D lesions above- and below-knee venous FP bypass</td>
<td>12 months: 73.2%</td>
</tr>
<tr>
<td>McQuade/2009</td>
<td>Prospective, randomized ePTFE/nitinol stent graft vs AK-popliteal bypass with synthetic material</td>
<td>86 patients/100 limbs</td>
<td>50 limbs: stent graft 50 limbs: bypass with Dacron graft or ePTFE</td>
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<tr>
<td>Kedora/2007</td>
<td>Prospective, Randomized Viabahn stent grafts vs prosthetic femoro-(above-knee) popliteal bypass</td>
<td>86 patients with femoro-popliteal artery occlusive disease</td>
<td>50 limbs treated with angio and stent 50 limbs treated with bypass with synthetic Dacron or PTFE grafts</td>
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<tr>
<td>Jensen/2007</td>
<td>Prospective, Randomized: PTFE and Dacron for above the knee femoropopliteal bypass</td>
<td>427 patients with chronic lower limb ischemia with bypass for supragenicular bypass: 205 with PTFE and 208 with Dacron</td>
<td>12-month: Dacron: ~78% PTFE: ~70%</td>
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<tr>
<td>Berglund/2005</td>
<td>Retrospective comparison: autologous saphenous vein grafts to PTFE grafts</td>
<td>499 patients undergoing bypass for CLI or claudication: - 139 with vein graft - 360 with ePTFE Vein, claudication: ~87% ePTFE, claudication: ~75%</td>
<td></td>
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</tbody>
</table>

DIFFERENCE IN PRIMARY PATENCY DEFINITION

- Surgical
  - Assessing flow through the bypass: open or closed?
  - Absence of binary restenosis (PSV ≥ 2.4)

- Endovascular
  - ≠

ANALYSIS OF PSV IN 100 SURGICAL, PRIMARY PATENT BYPASSES

<table>
<thead>
<tr>
<th>Total (N=100)</th>
<th>Binary restenosis (N=11)</th>
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<tbody>
<tr>
<td>F-P1</td>
<td>37 3</td>
</tr>
<tr>
<td>F-P2</td>
<td>0 0</td>
</tr>
<tr>
<td>F-P3</td>
<td>47 6</td>
</tr>
<tr>
<td>F-tibial</td>
<td>16 2</td>
</tr>
</tbody>
</table>

100% surgical primary patent = 89% endo primary patent

Bypass PP @12M = +/-78%

Bypass PP @12M = +/-70%

DES : ZILVER PTX

- ZILVER PTX – long lesions
  - Prospective, single-arm, multicenter study evaluating the Zilver PTX drug-eluting stent for treating patients with symptomatic lesions in the above-the-knee femoropopliteal artery
  - Main inclusion criteria
    - 135 patients
    - Rutherford category > 1
    - de novo or restenotic lesion with >50% stenosis
    - TASC C & D lesions
    - at least one-vessel run-off to the foot
  - Primary Patency at 12 months
    - Stent patency (<50% stenosis) was evaluated by angiography or duplex ultrasound; for this analysis, duplex threshold (<50% stenosis) was based on PSV of 2.5


- Single-arm Study: de novo long lesions
  - Lesions
    - Length ≤ 20 cm
    - Stenosis > 50%
    - Target vessel
    - Previous intervention
  - Primary endpoint: 24%
ZILVER PTX IN DE NOVO LONG LESIONS (>15CM)
PRIMARY PATENCY (PSVR <2.5)

77.6%

STUDY OBJECTIVES

To evaluate the performance of the Cook Zilver PTX paclitaxel-eluting stent compared to bypass surgery for the treatment of femoropopliteal TASC C&D lesions.

ZILVERPASS STUDY


STUDY TIMELINE

1 M 6 M 12 M

INCLUSION CRITERIA

1. Patient presenting with lifestyle-limiting claudication, rest pain or minor tissue loss (Rutherford Clinical Category 2 to 5)
2. Stenotic or occlusive de novo lesion located in the femoropopliteal arteries, suitable for endovascular therapy and for bypass surgery.
3. Total target lesion length is at least 150mm.
EXCLUSION CRITERIA

1. Any previous surgery and/or endovascular procedure in the target vessel.

2. Perioperative unsuccessful ipsilateral percutaneous vascular procedure to treat inflow disease just prior to enrollment.

3. Any planned surgical intervention/procedure within 30 days of the study procedure.

4. Major distal amputation (above the transmetatarsal) in the study or non-study limb.

PROXIMAL REF VESSEL DIAMETER

Lesion Length

Primary patency at 12 months, defined as:

- Absence of binary restenosis or occlusion within treated lesion*
- Absence of binary restenosis or occlusion at proximal and distal anastomoses and over the entire length of the bypass graft*
- Without TLR within 12 months
- Without clinically driven reintervention to restore flow in the bypass.

* Based on CFDU measuring a PSV ratio <2.4

Data on hospital stay for 219 patients. 1 Patient (ZILVER PTX group) died during hospital stay.

RISK FACTORS

Rutherford Baseline

Lesion Length

Very complex lesions: 94.65% were occluded and mean lesion length was 247.11mm

Primary outcome was full cohort.

Data on hospital stay for ZILVER PTX BYPASS.

PROCEDURE CHARACTERISTICS

Proximal Limb

Contracted:

Bypass material

Contrast dose

Data on hospital stay for ZILVER PTX BYPASS.
### 30-DAY FREEDOM FROM COMPLICATION RATE

- **Zilver PTX**: 96.60%
- **BYPASS**: 88.70%

Most common complications:
- Puncture site bleeding, hematoma
- Infections, lymphedema

### 12-MONTH PRIMARY PATENCY [180 / 220 PTS]

- **Zilver PTX**:
  - 12MFU: 78.10%
  - 220 patients
- **BYPASS**:
  - 73.10%

Primary Patency defined as absence of binary restenosis in both groups

### No Difference for Claudicants / CLI Patients in Primary Patency!

- **12-Month Primary Patency**
  - **Zilver PTX**:
    - 79.50%
  - **BYPASS**:
    - 72.40%

Primary Patency defined as absence of binary restenosis in both groups

### 12-Month Freedom from TLR [180 / 220 PTS]

- **Zilver PTX**:
  - 74.20%
- **BYPASS**:
  - 74.00%

Freedom from Target Lesion Revascularization - 180 pts - 12MFU

### Preliminary

- 180 patients
12-MONTH SECONDARY PATENCY [180 / 220 PTS]

Baseline 30 days 6MFU 12MFU-D365 12MFU-D395

ZILVER PTX: 95.20%
BYPASS: 95.10%

Preliminary: 110 patients

24-MONTH PRIMARY PATENCY [110 / 220 PTS]

Baseline 30 days 6MFU 12MFU 24MFU

ZILVER PTX: 68.20%
BYPASS: 63.70%

Preliminary: 110 patients

24-MONTH FREEDOM FROM TLR (110 / 120 PTS)

Baseline 30 days 6MFU 12MFU 24MFU

ZILVER PTX: 80.40%
BYPASS: 70.30%

Preliminary: 110 patients

24-MONTH SECONDARY PATENCY (110 / 220 PTS)

Baseline 30 days 6MFU 12MFU 24MFU

ZILVER PTX: 92.80%
BYPASS: 88.10%

Preliminary: 110 patients

COMPARABLE STUDIES

- RCT 126 patients
  - 63 Viabahn endovascular stent
  - 63 femoropopliteal bypass

ZILVERPASS trial
  - Surgical: N=107
  - Zilver PTX: N=113

12 months
  - Total Primary Patency: 73.10% 78.10%
  - Secondary Patency: 95.10% 95.20%
  - Freedom from TLR: 76.30% 82.40%

24 months
  - Total Primary Patency: 63.70% 68.20%
  - Secondary Patency: 88.10% 92.80%
  - Freedom from TLR: 70.30% 80.40%

COMPARABLE STUDIES – RESULTS
CONCLUSION

- Zilver PTX is obtaining outstanding primary patencies, also in long & more complex SFA lesions.
- Patency analysis in these study cohorts are based on objective CFDU PSVR assessments in both study arms.
- Preliminary results show at least a non-inferiority of Zilver PTX versus prosthetic bypass surgery ATK, with similar patency results and less complications.