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Open Surgery is the Best Treatment for Common Femoral Artery (CFA) Lesions

Disclosures

Disclosures to this presentation:

Consultancy
Advisory Board
Fees
Research funding
Fonds
Trainings
Patents/Licences
Keine

„Epidemiology“:
CFA involvement in PAOD

70% CFA involvement (1-3)
Men 6 – 10 x Women
75 % contralateral stenosis within 5 y
In 40 % combination with iliacal occlusion / stenosis
In 40 % combination mit SFA 7 BTK lesions
TEA (Germany): 15.5% intermittent claudication, 12.5% CLI (4)


Value Profundoplasty:
Limb Salvage

Survey –
GermanVasc Registry
n = 1000

Infrainguinal:
IC: 73% endovascular
CLI: 40.6% endovascular

CFA-TEA:
IC: 37.7% of all open reconstructions
CLI: 23.1% of all open reconstructions

Debus et al. (Gefaesschirurgie 2015, 20:135

CFA Endarterectomy with bovine Pericardium Patch

- Retrospective
- 01/1996 – 12/2008
- n= 1318 Patients
- Follow up 5 years
**Limb salvage (IC/CLI)**

- **387 TEA + PP in 356 pt**
- **30 day (%)**
- **5.5 y Follow up**

- **Wound complications**: 19 (4.9)
- **Lymphatic fistula**: 10 (2.5)
- **Deep infection**: 3 (0.8)
- **Early occlusion**: 7 (2.1)
- **Anastomotic aneurysm**: 4 (2.5)
- **Late infection**: 5 (1.4)

**Limb salvage (IC/CLI)**: 89.7% after 5 and 10 years

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**Femoral Endarterectomy and PP (bovine pericardium): own results**

**Limb salvage**

- **Femoral Endarterectomy and PP (bovine pericardium): own results**

**Publication Operations and Vessels Patency**

- **Mukherjee, Am J Surg 1998**
  - **n=29**, CFA or CFA+DFA/SFA (EA) 5-y-patency: 94%

- **Springhorn, Ann Vasc Surg 1991**
  - **n=29**, CFA, (EA+PP, EA, PP) 2-y-patency: 82%
  - 5-y-patency: 74%

- **Cardon, Ann Chir 2001**
  - **n=110**, CFA or CFA+DFA/SFA (EA, EA+PP)
  - 3-y-patency: 95%
  - 5-y-patency: 89%

- **Kang, J Vasc Surg 2008**
  - **n=65**, CFA (EA+PP), 57% hybrid procedure with iliac/femoropopl.
  - 1-y-patency: 93%
  - 5-y-patency: 91%
  - (no difference in patency between EA alone or hybrid procedure)

- **Balotta, Surgery 2010**
  - **n=117**, CFA (EA+PP) 7-y-patency: 96%

- **Malgor, Ann Vasc Surg 2012**
  - **n=169**, CFA (EA+PP) 5-y-patency: 96%

- **Nishibe, Ann Vasc Surg 2015**
  - **n=38**, CFA (EA+PP) including hybrid procedures
  - 1-y-patency: 90%
  - 2-y-patency: 85%

**Femoral Endarterectomy and Patency**

**Publication Operations and Vessels Patency Others**

- **Johnston, Ann Surg 1987**
  - **n=18**, CFA 1-month-patency: 78%
  - 1-y-patency: 59%
  - 2-y-patency: 49%
  - 3-y-patency: 37%

- **Silva, Catheter Cardiovasc Interv. 2004**
  - **n=20**, CFA

- **Stricker, J Endovasc Ther 2004**
  - **n=25**, (n=19 CFA, n=2 CFA+SFA, n=4 CFA+DFA)
  - 30-month-patency: 86%
  - 3-y-patency: 83%

- **Bonvini, J Am Coll Cardiol 2011**
  - **n=360**, CFA 1-y-restenosis rate: 27.6%

- **Baumann, J Vasc Surg 2011**
  - **n=104**, CFA Primary sustained clinical improvement rates:
  - 3 month: CLI 55%, CI 81%
  - 6 month: CLI 55%, CI 75%
  - 12 month: CLI 40%, CI 68%
  - 24 month: CLI 0%, CI 52%

- **Azéma, Eur J Vasc Cardiovasc Surg 2011**
  - **n=36**, CFA Primary sustained clinical improvements:
  - 1 year: 80%
  - 1-y-in-stent restenosis rate: 20%

- **Datillo, Catheter Cardiovasc Interv. 2013**
  - **n=31**, CFA 1-y-patency: 88%

- **Soga, Cardiovasc Interv Ther 2013**
  - **n=111**, CFA 1-y-patency: 74%
  - 5-y-patency: 47%

**Guidelines?**

- **ome femoral entarterectomy (TEA)** has historically been the preferred treatment for infrageniculate lesions involving the common femoral artery. The objective of this study was to determine the safety of surgical procedures in the most common and widely performed endovascular procedure. **Methods**- In this retrospective study, we reviewed the clinical data of patients who underwent endovascular treatment for femoral artery stenosis at our institution. The primary outcomes were technical success and clinical success, defined as the absence of major complications and death within 30 days of the procedure. The secondary outcomes were stent placement, type of device, and the rate of angiographic success. **Results**- A total of 117 patients were included in the analysis. The mean age of the patients was 72 years (range, 22-93 years). The mean follow-up time was 18 months (range, 1-36 months). The technical success rate was 100%, and the clinical success rate was 98%. The primary endpoint was achieved in all patients. **Conclusion**- Endovascular treatment for femoral artery stenosis is a safe and effective treatment option with excellent long-term results. Future studies are needed to determine the optimal indications and treatment strategies for this condition.
Complications

<table>
<thead>
<tr>
<th>Complication</th>
<th>Incidence [%]</th>
<th>References</th>
</tr>
</thead>
<tbody>
<tr>
<td>Death</td>
<td>1.3 – 6</td>
<td>Taylor 1990, Wengerter 1991</td>
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<tr>
<td>Wound complications:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>alloplastic</td>
<td>18</td>
<td>Feinberg 1990</td>
</tr>
<tr>
<td>Infection:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>vein</td>
<td>1.5 – 3</td>
<td>Feinberg 1990</td>
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<tr>
<td>alloplastic</td>
<td>3.86</td>
<td>Debus 1998</td>
</tr>
<tr>
<td>HUV</td>
<td>1.48</td>
<td>Feinberg 1990</td>
</tr>
<tr>
<td>Edema:</td>
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<td></td>
</tr>
<tr>
<td>vein</td>
<td>50 – 100</td>
<td>Schubart 1986, Tyndall 1994</td>
</tr>
<tr>
<td>alloplastic</td>
<td>35</td>
<td>Kwan 1999, Debus 2012</td>
</tr>
<tr>
<td>Lymph fistula</td>
<td>0.5 – 7.8</td>
<td>Roberts 1993, Tyndall 1994</td>
</tr>
</tbody>
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54 % need > 3 months hospital treatment
50 % mortality after 5 years

(Koshima et al., JVS (2004))

KISS 2004-2010

Wound infections in Vascular Surgery

- Aorta (n=2130): 1,07% (n=23)
- Carotis (n=4260): 0,07% (n=3)
- Surgery in the groin (n=15390): 2,24% (n=344)

KISS Data base, www.nrz.de

Own Series: Wound healing / Infection

- primary Wound healing 1267 (95,9%)
- Sec. Wound healing 54 (4,1)
- Lymph fistula 19 OP 9 sec. 54 prim. healing
- Wound infection 20 OP 45 sek. healing
- Patch infection 4 patch removal, 2x sek. healing

Graft infection: Complications

- Hemorrage (Anastomosis): 26-40%
- Amputations: 17-79%
- Hospital-Letality: 7-48%

Kieffer et al. (2001), Sayaj et al. (2014), O’Connor et al. (2006), Ciglett et al. (1993)
Conclusion

In the endovascular first era, femoral endarterectomy is the first-line treatment in occlusive disease of the common femoral artery!

- Good long-term patency of endarterectomy
- Low complication rate of endarterectomy
- Lack of (long-term) data for endovascular treatment

Indication for endovascular treatment?
- High risk patients for narcosis, patients with limited life expectancy
- Hostile groin, multiple vascular procedures of the groin

Thank you!