Hybrid procedure in patients with critical ischemia with common femoral artery and aortoiliac occlusive disease for TASC II D

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NO Disclosure
40% of patients with CLI lose their limbs within 6 months if prompt revascularization treatment is not performed.


Patients with CLI typically present with multiple complex lesions in their lower extremities.

Complete lower extremity revascularization was beneficial for patients with CLI, avoiding major amputation.

Takayama, T., et al., Vascular and Endovascular Surgery, 2018
What is a hybrid procedure?

Hybrid revascularisation combines both open and endovascular techniques simultaneously.
Endovascular Surgery vs Vascular Surgery

Endovascular Surgery = Vascular Surgery
Advantages of hybrid revascularisation procedures

• Less invasive than open revascularisation
• Allows prompt lower limb revascularisation
• Reduces length of hospital stay and overall cost
• Convenient to patients
• Alternative to open surgery in medically high risk patients
• Increasingly used in multilevel arterial occlusive disease
When these lesions involve the CFA, a hybrid procedure, combining femoral endarterectomy and EVT, is a good treatment option.
## Revascularization of aorto-iliac occlusive lesions (continued)

<table>
<thead>
<tr>
<th>Recommendations</th>
<th>Class</th>
<th>Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary stent implantation, rather than provisional stenting, should be considered.</td>
<td>IIa</td>
<td>B</td>
</tr>
<tr>
<td>Open surgery should be considered in fit patients with an aortic occlusion extending up to the renal arteries.</td>
<td>IIa</td>
<td>C</td>
</tr>
<tr>
<td>In the case of ilio-femoral occlusive lesions, a hybrid procedure combining iliac stenting and femoral endarterectomy or bypass should be considered.</td>
<td>IIa</td>
<td>C</td>
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<tr>
<td>Extra-anatomical bypass may be indicated only for patients with no other alternatives for revascularization.</td>
<td>IIb</td>
<td>C</td>
</tr>
</tbody>
</table>
Aim of study

To look at mid term outcomes of hybrid revascularisation procedures in patients with CLI
Patients

- From April 2013 to July 2017
- 56 patients
- 59 procedures
- Male: 39 (68.2%)
- Female: 17 (31.8%)
- Median age: 76 years (39-82)
Indication

- Rest pain : 42 (75%)
- Gangrene : 14 (25%)

TASC II (Iliac lesions)

- C 15
- D 45
Risk factors for atherosclerosis and associated diseases

- Number of patients $N = 56$ (100%)
- Coronary artery disease $47$ (87)
- Diabetes $14$ (24.7%)
- Hypertension $56$ (100)
- Dyslipidaemia $28$ (49.4)
- Smoking $37$ (65.8)
- Obesity $8$ (15.2)
- Respiratory disease $10$ (18.8)
- Prior abdominal surgery $8$ (15.2)
Procedures

- Remote endarterectomy CFA EIA +stenting EIA/CIA  36
- Remote endarterectomy CFA EIA  SFA +stenting EIA/CIA  23
ENDARTERECTOMY TECHNIQUE
Follow up

- Clinical evaluation
- Ankle-brachial-index
- Duplex
- 6 weeks, 3 months and annually
- All patients were placed or continued on acetylsalicylic acid and clopidogrel (6 month)
Results

- Initial technical success: 59 (100%)
- The mean ABI increase was 0.40
- The mean operation time: 110 minutes (70 to 135 minutes)
- Mean length of hospital stay: 5.1 days
- Limb salvage rates: 95%
- PO Mortality: 0%
- Primary Patency: 1 and 3 year 86.7% and 81%
- Cumulative survival: 1 and 3 year 90.8% и 70%
Case #1 Occlusion External Iliac artery, common femoral artery and SFA. Critical limb Ischemia.

ABI 0.2
Case #1 Remote Iliac Endarterectomy Stent Iliac Artery, Remote SFA Endarterectomy SFA
Case #1 Remote Iliac Endarterectomy Stent Iliac Artery, Remote SFA Endarterectomy Stent SFA
Case #1 FINAL RESULTS

ABI 1.0/0.97
Case #1

after 4 months

after 15 months
Conclusion

The simultaneous hybrid CFA endarterectomy and endovascular therapy can provide an immediate satisfactory results, durable midterm patency, and also less invasive therapeutic option in high-risk patients.
THANK YOU!
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