Common femoral artery intervention in Japanese situation

Hiroki Takahashi, MD. PhD.

First Department of Internal Medicine, Yamagata University School of Medicine
Yamagata, Japan
Disclosure

Speaker name: Hiroki Takahashi

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 conflict of interest
Endarterectomy for common femoral artery lesion is the gold standard in patients with normal surgical risk.

1- and 5-year primary patency of endarterectomy for CFA lesions have been reported to be 93 and 91%, respectively, (and assisted patency may be as favorable as 100%)


Drawback

30-day mortality rates of up to 2.5% and infection rates of up to 30%.

Surgical patch may lead to lymphocele formation

Scar tissue may complicate future percutaneous intervention for other vascular beds.

CFA occlusion case with concomitant inflow occlusion

Surgical treatment for this disease distribution includes extensive endarterectomy or/and bypass procedures.

More invasive procedure than simple endarterectomy!
Purpose of the present study

To explore the acute procedural success rate and endovascular short-term patency of a consecutive series of patients with obstructive disease of CFA with concomitant iliac occlusion.
Representative case of CFA occlusion with concomitant inflow occlusion

Vessel occlusion started at the level of proximal EIA, and it extend into the distal CFA
Participant flow

< Retrospective, single center analysis >

771 patients received endovascular treatment in our hospital between January 2008 and December 2013

739 patients excluded because of other lesions

32 patients received endovascular treatment for CFA

5 patients excluded because of CFA stenosis and isolated CFA occlusion

27 patients, 28 lesions De novo obstructive disease of CFA with concomitant iliac occlusion

1 patients excluded because of bilateral severe CFA calcification

26 patients, 26 lesions achieved successful EVT (1 bailout CFA stenting)
All patients were medicated with dual antiplatelet therapy (Aspirin 100mg/day, Clopidgrel 75mg/day) before the endovascular therapy.

- 0.035-, 0.018- or 0.014-inch guide wire was used to cross the lesion.
- Stent deployment on the occluded iliac segment incorporated CFA balloon angioplasty in all patient.
- If a suboptimal results was found after repeated balloon angioplasty, a stent was implanted in CFA for bail-out.

Mean follow-up period

14 months (range 4 to 24 months)

Duplex ultrasound was performed at 1 week after procedure, and done at 1, 3, 6, 9 and 12 months, respectively. Restenosis was defined as >2.5 of PSV at CFA level.

Study end points

Primary endpoint: Primary patency
Secondary endpoint: Secondary patency,
Clinical characteristics of patients

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<tbody>
<tr>
<td><strong>Number of patients</strong></td>
<td>26</td>
</tr>
<tr>
<td><strong>Age (years)</strong></td>
<td>74 ± 9</td>
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<tr>
<td><strong>Females (%)</strong></td>
<td>5 (19.2)</td>
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<td><strong>BMI (kg/m²)</strong></td>
<td>23 ± 6</td>
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<tr>
<td><strong>Hypertension (%)</strong></td>
<td>23 (88.5)</td>
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<td><strong>Dyslipidemia (%)</strong></td>
<td>14 (53.8)</td>
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<tr>
<td><strong>Diabetes (%)</strong></td>
<td>16 (61.5)</td>
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<tr>
<td><strong>Smoker (%)</strong></td>
<td>19 (73.1)</td>
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<tr>
<td><strong>Claudicator (%)</strong></td>
<td>24 (92.3)</td>
</tr>
<tr>
<td><strong>SFA disease (%)</strong></td>
<td>16 (61.5)</td>
</tr>
<tr>
<td><strong>Pre - ABI</strong></td>
<td>0.52 ± 0.21</td>
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<tr>
<td><strong>Post - ABI</strong></td>
<td>0.87 ± 0.14</td>
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## Results

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<tbody>
<tr>
<td>Right/Left</td>
<td>16/10</td>
</tr>
<tr>
<td>Lesion length (mm)</td>
<td>12.4 ± 5.1</td>
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<tr>
<td>Reference CFA diameter (mm)</td>
<td>7.1 ± 0.8</td>
</tr>
<tr>
<td>Number of iliac stent</td>
<td>1.5 ± 0.4</td>
</tr>
<tr>
<td>Total iliac stent length (mm)</td>
<td>108.6 ± 31.2</td>
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<tr>
<td>Final balloon diameter (mm)</td>
<td>6.9 ± 1.1</td>
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<tr>
<td>Bifurcation lesion (%)</td>
<td>4 (15.4)</td>
</tr>
<tr>
<td>SFA occlusion (%)</td>
<td>2 (7.7)</td>
</tr>
<tr>
<td>SFA stenosis (%)</td>
<td>14 (53.8)</td>
</tr>
<tr>
<td>Bailout CFA stenting (%)</td>
<td>1 (3.8)</td>
</tr>
<tr>
<td>Procedure success (%)</td>
<td>25 (96.2)</td>
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Successful EVT and angio-graphical follow up

Before

After

1 year after procedure
Kaplan-Meier analysis of primary and secondary patency

- Primary patency: 80.7%
- Secondary patency: 92.3%
Summary of the Results

- Procedure success rate for these relatively complex lesion was 96.2% (1 bail-out CFA stenting)

- The 1-year primary patency and secondary patency for obstructive CFA with concomitant iliac occlusion were 80.7% and 92.3%, respectively.
1-year primary patency for ‘isolated’ CFA lesion after EVT was 73.5% in Japan \(^1\), and 85.9% in US \(^2\).

Discussion

1-year primary patency for intraoperative EIA stenting after CFA endarterectomy/patch angioplasty was 84%, and that of primary-assisted patency was 97%. Our present analysis data (1-year primary patency 80.7%) is comparable with these combined therapeutic option!
Restricted Japanese situation

We can not use these helpful devices for CFA angioplasty in Japan
Endovascular approach could be a valid therapeutic option for patient having obstructive CFA disease with concomitant iliac occlusion
An Observational prospective Multicenter registry study on Outcomes of peripheral arTERial disease patients treated by Angioplasty therapy in aortoiliac artery (OMOTENASHI Registry in Japan)
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