A case of successful treatment with EVT for CFA occlusion after stent grafting for abdominal aortic aneurysm

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Disclosure

Speaker name: Shigehiro Ishigaki

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
Case  76y.o  Male

Chief complaint:
Bilateral intermittent claudication

History of Present illness:
This patient has been visiting a local doctor for hypertension. He had intermittent claudication since March 2022, and was suspected to have LEAD. He was referred to our outpatient clinic in May 2022.
Past Medical history:
Hypertension,
Effort angina: PCI (2018 mid RCA, mid LAD)
   : CABG (2018 RITA-LAD, LITA-firstD)

Medications:
Aspirin 100mg, Lansoprazole 15mg, Atorvastatin 5mg
   Clopidogrel 75mg, Amlodipine 2.5mg, Nicorandil 5mg × 2

Social history:
Smoking history: No
Drinking history: occasional drinking
Physical Examination

Vital signs:
- BT 36.2℃
- BP 133/85mmHg
- HR 75/min
- RR 16/min
- SpO2 98%

Cardiovascular:
- Regular rate and rhythm, normal S1 and S2, no murmurs

Chest:
- No wheezes, rhonchi, or crackles

Extremities:
- No edema
- Poor palpation of right dorsalis pedis artery
no significant findings
<table>
<thead>
<tr>
<th>Blood test</th>
<th>WBC 4120/μl,</th>
<th>TP 7.3 g/dl,</th>
<th>Na 141 meq/l</th>
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</thead>
<tbody>
<tr>
<td>BUN 16.0 mg/dl,</td>
<td>Hb 11.9 g/dl,</td>
<td>Cr 0.82 mg/dL</td>
<td>K 3.8 meq/l</td>
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<tr>
<td>AST 27 U/l,</td>
<td>Plt 21 x 10^4/μl,</td>
<td>AST 27 U/l,</td>
<td>Cl 107 meq/l</td>
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<tr>
<td>ALT 18 IU/l,</td>
<td>PT-INR 1.64,</td>
<td>ALT 18 IU/l,</td>
<td>CK 116 U/l</td>
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<tr>
<td>LDH 193 IU/ml,</td>
<td>APTT 32.3 sec</td>
<td>LDH 193 IU/ml</td>
<td>CRP 0.09 mg/dl</td>
</tr>
<tr>
<td>T-Cho 154 mg/dl,</td>
<td>D-dimer 1.9 μg/ml</td>
<td>T-Cho 154 mg/dl,</td>
<td>BNP 21.6 pg/ml</td>
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<tr>
<td>LDL-c 94 mg/dL,</td>
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<td>LDL-c 94 mg/dL,</td>
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</tr>
<tr>
<td>HDL-c 48 mg/dL</td>
<td></td>
<td>HDL-c 48 mg/dL,</td>
<td></td>
</tr>
</tbody>
</table>
May 2022 Contrast CT

- Abdominal aortic aneurysm (AAA) (39 × 40mm)
- Narrowing of the outflow tract to the common iliac artery
The patient underwent an emergency patch angioplasty because of a dissected vessel during closure of the puncture site after stent grafting, and subsequently developed severe claudication symptoms due to occlusion at the same site.
After stent grafting, the patient had claudication and his right ABI was decreased.

Contrast CT showed occluded right CFA.

We decided to perform EVT for the occlusion.
We performed bidirectional wiring from left radial artery and right dorsal artery.
• The lesion was so hard that DP60(60g) wire could not pass.
• We performed balloon dilation retrogradely at the occluded site.
But a false lumen enlarged after balloon dilatation.

We gave up 1st EVT at this point because of procedure time and much contrast.
We tried “BAMBOO SPEAR” technique (direct Bare Metal needle puncture and Balloon angioplasty in calcified Plaques of the common femoral Artery guided by angiography) (Naoki Hyakawa et al. CVIR Endovasc. 2021.)
• We inserted a bare metal needle directly from distal CFA to the proximal.
• Finally, we were able to pass a wire through this needle.
We used the following ballons and dilated the CTO:

- Coyote 4.0/40mm
- Ranger 6.0/60mm
- Sterling 8.0/40mm
Final angiography

• Successful procedure was achieved with “BAMBOO SPEAR” technique.
Summary

• The patient underwent an emergency patch angioplasty due to a dissected vessel during closure of the puncture site after stent grafting, and subsequently developed severe claudication symptoms due to occlusion at the same site.

• The CFA occlusion was hard because of surgical problem.

• In the 1\textsuperscript{st} EVT, the lesion was hard and the wire was in the subintimal even after using up to JupiterFC60.

• In the 2\textsuperscript{nd} EVT, Successful procedure was achieved with \textbf{BAMBOO SPEAR} technique.
Consideration

• Surgical endarterectomy is the standard treatment for CFA occluded lesions, with excellent long-term patency rates.


• **BAMBOO SPEAR** has also been proposed for occlusive lesions.