A Giant Popliteal Artery Aneurysm Treated With Resection and Bypass Using Vascular Graft

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Disclosure

Speaker name: Shuiting Zhai

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
Case Data

- Wang **, Male, 62YO

- Progressive weakness of double lower extremities with a gradually increasing mass of left popliteal fossa 14 yrs

  Pigmentation and ulceration of left leg 5 yrs.
Present and Post history

- The patient is healthy before
- He underwent resection of left popliteal mass in local hospital 1 year ago, but failed because of the complexity of mass.
Physical Examination

- Both lower limb skin temperature was low.
- Pigmentation and ulceration on left ankle.
- Double femoral artery pulse (+) Double dorsal artery (-)
# Lab Data

<table>
<thead>
<tr>
<th>Test</th>
<th>Result</th>
<th>Normal Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>WBC</td>
<td>4.87 x 10^9/L</td>
<td>3.5-9.5</td>
</tr>
<tr>
<td>HB</td>
<td>141 g/L</td>
<td>130-175</td>
</tr>
<tr>
<td>PLT</td>
<td>215 x 10^9/L</td>
<td>100-350</td>
</tr>
<tr>
<td>ALT</td>
<td>7 U/L</td>
<td>9-50</td>
</tr>
<tr>
<td>AST</td>
<td>13 U/L</td>
<td>15-40</td>
</tr>
<tr>
<td>ALB</td>
<td>38.5 g/L</td>
<td>40-55</td>
</tr>
<tr>
<td>TG</td>
<td>3.76 mmol/L</td>
<td>0.56-1.46</td>
</tr>
</tbody>
</table>

| ESR  | 13 mm/h        | 0-15         |
| CRP  | 10.42 mg/L     | 0-10         |
| LgG  | 16.4 g/L       | 6.94-16.2    |

- **Autoimmune antibodies**: Normal
ABI

Left: 0.7

Right: 0.5
CTA
CTA
Diagnosis

- Popliteal Artery Aneurysm, PAA
- Coronary Artery Aneurysm, CAA
Discussion

- The reason of left leg skin ulceration
- Solution
Reason of Left Leg Skin Ulceration

DSA
Treatment of PAA(Open)

- Open surgery should still be considered as a gold standard therapy[4]
- Endovascular therapies offer an alternative but long-term results are pending

The most commonly surgical technique is aneurysm exclusion and autologous vein or PTFE vassular prosthesis bypass.

A major concern is that a flexion joint is crossed [6]

Our Therapeutic Plan

Left Popliteal Artery Aneurysm Resection and Bypass Using Vascular Graft
Procedure
Pathological Result

Inflammatory exudation with bleeding
Results

ABI:
Left 0.8
Right 0.5
Next therapeutic plan
Conclusion

- PAA is rare and mainly affect the lower extremity arterial blood supply, oppress vein and thus affect the return blood flow.
- Open surgery of PAA should be considered as a gold standard therapy
- EVPAR can be chose but must cautiously
Thanks for your attention!
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