Endovascular management of a ruptured true popliteal artery aneurysm


Department of Vascular Surgery, KAT General Hospital, Athens, Greece.
Disclosure

Speaker name: .................................................................

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
Introduction

- True aneurysms of the popliteal artery are the most common peripheral arterial aneurysms
- They are multifactorial, associated with atherosclerosis (*Wright et al.*)
- 30-50% of PAAs $\rightarrow$ AAA
- up to 70% of bilateral PAAs $\rightarrow$ AAA
- 45% asymptomatic at diagnosis, high morbidity/amputation risk in complicated cases
- Rupture of such cases is unusual (0.5-7%)
Case presentation

- 75-year-old male
- History: AF, Cardiomyopathy, COPD
- Painful palpable mass
- Left distal thigh (3 weeks)
- Reduced perfusion distally: paleness, paresthesia, paresis, monophasic Doppler signal
CTA

- Ruptured aneurysm
- Left popliteal artery
- Pressing against the SFA
- Atherosclerosis distally
- A smaller right PAA
Treatment

- Combined repair
- Dissection and control of SFA
- Sheath, J wire, crossing using hydrophilic wire and Vertebral catheter
- Angioplasty of PA II-III using peripheral angioplasty balloon (size 4 mm)
- 2 Viabahn stent-grafts (10X10mm, 9X15mm)
- Decompression of hematoma through medial femoral incision
Postoperative course

- Palpable distal arteries
- Ipsilateral foot paresis (neurapraxia)
- Discharge under anticoagulant and antiplatelet therapy
- Asymptomatic (6 months)
- He was treated also for the contralateral PAA
Discussion

- Open surgery – bypass ➔ golden standard
- Endovascular treatment ➔ unfit patients
- Similar one-year patency (Cina et al.)
- Limited long-term results
- Pooled patency: around 69-77% (Patel et al.)
- Increased 30/90-day re-interventions (Gallnanes et al.)
- Viabahn ➔ PTFE coverage, flexibility
- Anatomy, Diameter discrepancy ➔ limitation
Conclusions

- Ruptured PAAs combined with distal arterial atherosclerosis could be safely treated endovascularly in patients of high surgical risk.

- Providing satisfying limb salvage and patency, and lower mortality.

- Decompression of hematoma is essential when adjacent structures are under pressure.
THANK YOU FOR YOUR ATTENTION
Endovascular management of a ruptured true popliteal artery aneurysm


Department of Vascular Surgery, KAT General Hospital, Athens, Greece.