


Treatment Of Popliteal Aneurysms: When Conservative, When Open, When Endovascular: What Are The Hard Data?

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I have no disclosures for this topic

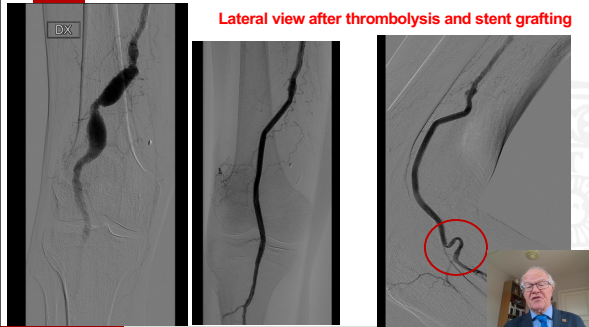




When to operate on a PAA?

- The size of an aneurysm predicts rupture, but only 2% of PAA are operated on for rupture
- A very large aneurysm can also cause DVT and pressure symptoms
- The risk factors for embolism and thrombosis are intraluminal thrombus, angulation and tortuosity
- Larger aneurysms do have more thrombus and tortuosity

Lateral view after thrombolysis and stent grafting

Hard facts from the largest database


Peripheral Arteries Eur J Vasc Endovasc Surg (2020) 60, 721–729

VASCUNET REPORT

Contemporary Treatment of Popliteal Artery Aneurysms in 14 Countries: A Vascunet Report

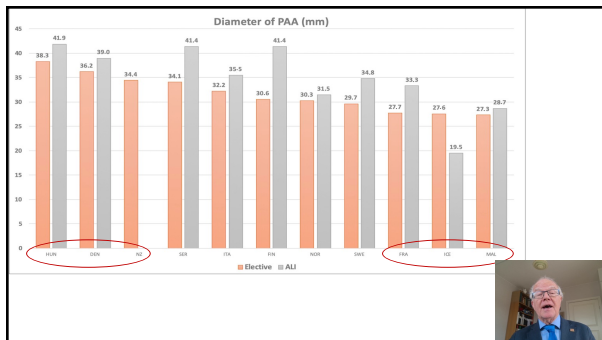
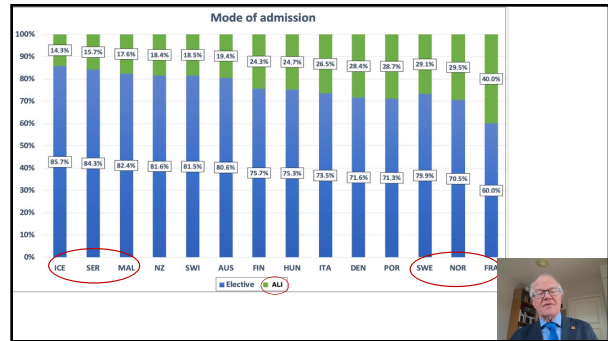
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Olivia Grip MD, PhD



The largest database on PAA

- Data on PAA repair from 14 countries
- 9,823 cases of PAA repair
 - 73% elective repair
 - 25% acute ischaemia
 - 2% rupture
- Great variability between countries was identified:
- Incidence of PAA repair, patient selection, surgical technique and outcome



How to operate a PAA?

- Endovascular treatment (stent graft) has worse outcome, especially if the outflow is poor, as with ALI
- Posterior open approach results in a shorter graft, and a possibility to correct tortuosity and angulation, better long-term results
- ...but more wound complications, dedication to detail is necessary, when the wound is closed and drained

Treatment of popliteal aneurysm: Endovascular surgery, read the IFU!


Viabahn Instructions for use

- Sealing zone of 2cm proximally and distally
- That the patient tolerates anticoagulants or anti-platelets
- Small differences in vessel diameter proximally and distally to avoid overlapping stents at "points of flexion".
- At least one-vessel outflow

Elongation cannot be treated with endo

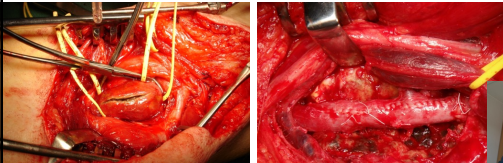



Thrombolysis of PA with acute ischaemia improves outcome

- There is a great advantage of opening the occluded crural arteries before repair of the PA
- In a large national study, 92 of 118 who had preoperative thrombolysis for acute ischaemia, 78%, improved outflow
- Transforms an emergency into an elective situation



Open Repair with posterior approach is the procedure of choice, why?

- The by-pass is shorter and in an anatomical position
- Although a venous by-pass has better long-term results, a prosthetic by-pass has better patency than an endograft
- There are no problems with late expansion

The ESVS ALI Guidelines

Three recommendations:

Recommendation 34
For patients with acute limb ischaemia secondary to thrombosis of a popliteal artery aneurysm, repair of the aneurysm with a saphenous vein bypass should be considered.


Class	Level	References
Ia	B	Huang et al. (2014), ¹⁰⁰ Cervin et al. (2015) ¹⁰¹

Recommendation 36
For patients with acute limb ischaemia secondary to popliteal artery aneurysm, stent grafting is not recommended as first line treatment.

Class	Level	References
III	B	Huang et al. (2014), ¹⁰⁰ Cervin et al. (2015) ¹⁰¹

Recommendation 35
For patients with acute limb ischaemia secondary to popliteal artery aneurysm, pre-operative or intra-operative thrombolysis to improve runoff should be considered.

Class	Level	References
Ia	B	Ravn et al. (2007), ¹⁰² Gabrielli et al. (2015) ¹⁰³



Conclusions

- Operate when the diameter is > 20 mm or even when it is smaller if you see thrombus
- Open surgery with posterior technique has the best long term patency, without risk of late expansion
- Endovascular stent graft can be considered if the patients is a poor candidate for open surgery, and if there is no severe angulation or tortuosity

