Prosthetic open bypasses should be used to treat most popliteal aneurysms: When are they mandatory?

Laurent CHICHE,
Thibaul COUTURE, Jean-Michel DAVAINÉ,
Julien GAUDRIC, Fabien KOSKAS

Department of Vascular Surgery
Pitié-Salpêtrière University Hospital
Paris, France
laurent.chiche@aphp.fr

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Endovascular Treatment of Popliteal Artery Aneurysms: A Word of Caution after Long-Term Follow-up

Disclosures

Open repair: what are the options?
Open repair: what are the options?

GSF bypasses

Exclusion-GSV graft

GSF bypasses

SFA bypasses

Crawford, 1958

Prosthetic bypasses

Prosthetic bypasses: Who should be selected?

- Distal neck on retroarticular popliteal artery
- Good arterial runoff
- Angio-CT > digital angiogram
Prosthetic bypasses: who should be selected?

- GSV absent or unfit for bypass
- No below knee extension

Prosthetic bypasses: when are they mandatory?

- Medial or posterior approach
- End to end anastomoses (congruent diameters)
- Complete section of infraarticular popliteal artery sometimes required (medial approach)
- Distal anastomosis first
- Endoaneurysmorraphy of collaterals
- Proximal anastomosis / SFA or CFA

Prosthetic bypasses: technical aspects
October 2010 – January 2018
• 18 men, mean-aged 69.6 yo (59 – 85)
• 20 popliteal aneurysms: 15 asymptomatic, 4 claudication, 1 neurological compression
• Mean diameter: 29.4 (20 – 56) mm
• Runoff: 3 arteries/18 aneurysms
  2 arteries/2 aneurysms

Prosthetic bypasses: Personal series

- Short bypass (from popliteal artery or distal SFA): 15
- Long bypass (from CFA): 5
- Mean LOS: 4 d (3 – 12)
- Mean FU: 26.8 mo (3 – 85)

- 2 unrelated deaths during FU
- Limb salvage rate: 100%
- Primary 1-2-3 y patency rates: 100 – 90 – 90%
- Secondary 1-2-3 y patency rates: 100%

Conclusions

- Prosthetic open bypasses are a simple, safe and durable option to treat most popliteal aneurysms
- Results compares favorably with other open or endovascular techniques
- A French National survey (AURC) will soon provide further results on a larger cohort