Comparison of Open and Endo Popliteal Aneurysms Repair in the Same Patients

Samy S. Nitecki
Department of Vascular Surgery
Rambam Health Care Campus

Background

- Aneurysm is defined as a focal dilatation with increased diameter of at least 50%.
- PAA is the most common peripheral aneurysm with an incidence of 5-7.5 per 100,000.
- There is a male predominance.
- Approximately 50% have contra lateral PAA and/or AAA.
- The treatment is either open surgery or endovascular.
- Symptomatic PAA results in limb ischemia due to thrombosis or distal embolization dictating an emergency treatment for limb salvage.
- Asymptomatic PAA are treated to prevent limb ischemia. They are referred to as "the sinister harbinger of sudden catastrophe".

Objectives

- To present our experience with open and endovascular treatment of PAA.
- To compare the treatments and long-term results of patients with bilateral aneurysms.

Methods

- Institutional experience with PAA in the years 2000-2015 is presented.
- Data including demographics, treatments and results was retrieved, especially for patients with bilateral aneurysms.
There were 94 patients with a mean age of 69 years.
- 17 patients had AAA (18%).
- Male predominance of 11:1
- 28 patients had bilateral aneurysms (30%, all males).
- Average aneurysm size: 32 mm (range 13-70).
- Average follow up 43 months (range 9-108).
- 82% Smokers, 50% HTN, 32% IHD, 18% D.M and 10% AAA

Presentation:
- Asymptomatic: 17 pts (60%)
- Thrombosis: 10 pts (36%)
- Rupture: 1 pt (4%)

In 12 out of the 17 asymptomatic patients (70%) at least one distal artery was occluded due to distal embolization.

We have not found a correlation between size and symptoms (regardless of inconvenience).

Symptomatic presentation was encountered even in a 13 mm aneurysm (a 24 mm aneurysm was encountered in the contra lateral limb).

There was not a significant difference in PAA size and the treatment employed (open Vs. endovascular).
• **Initial Treatment:**
  
  Open Surgery 13 (46%)  
  Endovascular 14 (50%)  
  Thrombolysis>>> Endo>>>Surgery 1 ( 4%)  

4 pts. - both legs open surgery  
5 pts. - both legs endovascular  
5 pts. - one leg open the other endovascular
• Complications:
  Mortality: None
  Amputation: 1 (4%)
  Wound Infection: 2 (7%)
  Pseudoaneurysm: 3 (11%) - Surg
  Thrombosis: 5 (18%) - Endo
  Re-intervention: 8 (18%)

Comulative Patency

Conclusions
• There is no correlation between PAA size and thrombosis or rupture. Thus, ALL PAA should be treated.

• Both endovascular treatment and open surgery are acceptable. In this study, there is a trend towards less reintervention rate and better long-term results with open surgery.

• More trials are warranted.

Thank you!