Composite PTFE-Autologous Saphenous Vein Graft to Treat Critical Limb Ischemia: Results in the Long Term Follow-Up

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Introduction
The great saphenous vein (GSV) is the gold standard conduit in below knee revascularization particularly when targeting a single tibial vessel. In cases of vein unavailability, composite graft heparin-bonded e-PTFE and saphenous vein was constructed, according the conclusions of the Italian Propaten Registry.

Materials and Methods
Authors retrospectively (January 2004 –January 2019) analyze a group of patients candidates for single distal bypass selected for the saphenous vein grafting. When GSV was only partially available, composite graft (propaten + at least 10 cms of saphenous vein) was used, medium and long term results were evaluated (Group A)
Group A (58 pts) was compared with group of patients who received GSV (Group B = 275 pts).
Clinical data and the risk factors were statistically homogeneous in both groups.
Average GSV length was 12 cm (10>30).

Results
At 30-days mortality, thrombosis and amputation were respectively 0,8, 6% and 1,7% in group A; 1,1%, 4,5% and 3% in group B: there were no statistically significant differences between groups.
Mean follow-up was 30 months (1-140) in group A, 42 months (1-188) in group B
Primary patency at 12 years was 31% in group A and 46% in group B (p<0.05; OR 0,51)
Amputation free survival at 12 years was 28% in group A and 38% in group B (p=0,9; OR 1,02)

Conclusions
In terms of primary patency GSV graft remains the conduit of choice, but the composite graft has demonstrated to be a viable alternative solution than the only prosthetic graft. This observation we believe is related to factors that influence patency essentially: run-off and homogeneity of the caliber at the level of the distal anastomosis, conditions met by employing composite graft.

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