

Long-term Results of Percutaneous Transluminal Angioplasty in Patients with infrainguinal Vein Graft Stenosis

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Objectives: Graft stenosis is a well known risk factor for occlusion. This study examined the results of percutaneous transluminal angioplasty (PTA) in patients with significant stenosis after infrainguinal vein graft surgery.

Methods:

From January 1996 to December 2005, 165 consecutive patients with 193 infrainguinal vein grafts were included in a prospective single centre study. The 193 grafts consisted of 156 femoro-infragenicular and 37 femoro-supragenicular bypasses, 144 were reversed and 49 were non reversed vein grafts. Regular controls took place after 3, 6, 12, 24, 36, 48 and 60 months, consisting of clinical examination, oscillography, ankle brachial index measurement and duplex scan. Patients with occlusion during the first three months were excluded. In case of significant stenosis (>79%) of the graft, the anastomosis or the immediate in- or outflow vessels, PTA was performed. Restenosis was defined by stenosis >79% at the same site. The PTA group was compared with the non intervention group with regard to long-term patency using Kaplan-Meier Life-Tables and the Log Rank Test.

Results:

Mean follow-up time was 31 (0-108) months. In total 85 stenoses (thereof 26 restenoses) in 38 (19.7%) limbs were treated. In the intervention group primary assisted patency rate after 36 and 60 months was 93% and 93% respectively, whereas in the non-intervention group patency rate was 92% and 88% respectively. Overall this difference was not statistically significant ($p=0.505$).

Conclusions:

With the aim of maintaining patency after infrainguinal bypass surgery, PTA was performed in every fifth patient to treat a stenosis of the bypass or the immediate adjacent arterial segment. Long-term patency rates in the patients who had PTA seem to be at least as high as in patients without bypass stenosis.