

Value of Duplex after Percutaneous Transluminal Angioplasty to Determine the Need for Redilatation: What Is the Best Timing of Duplex Studies after Percutaneous Transluminal Angioplasty?

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Since its introduction in the 1960s, peripheral angioplasty has established its place in the field of vascular intervention. Some critics question its durability, whereas others now consider it the first line of treatment in patients with critical ischemia. To determine its durability, we follow up all patients undergoing angioplasty, clinically and with ankle brachial indices and duplex imaging at 6 weeks, 6 months, and 6 months thereafter. We report the results of a consecutive group of 187 patients who underwent infrainguinal angioplasty for severe intermittent claudication ($n = 50$) and rest pain ($n = 137$).

Of the 60 lesions treated for intermittent claudication, 6 failed immediately, giving a technical success rate of 88%. The technical success rate for the 160 lesions treated for critical ischemia was 87% (17 failures). During follow-up a total of 88 lesions restenosed or occluded; however, in many instances patients remained asymptomatic. This most commonly occurred in the first 6 months (77%) in patients with intermittent claudication and in the first 30 days (59%) in patients with critical ischemia. Three patients progressed to bypass in the claudication group. In the critical ischemia group, 10 had repeat angioplasty, 6 had bypass procedures, and 8 had amputations. Cumulative limb salvage for the critical ischemia group was 94% at 30 days; this fell to 83% at 2 years.

These results suggest that recurrent stenosis is not synonymous with symptoms. The timing of restenosis is variable and there is no optimal time for duplex scanning following angioplasty.