SIX-MONTH CLINICAL OUTCOMES AFTER BELOW-THE-KNEE ANGIOPLASTY FOR CRITICAL LIMB ISCHEMIA IN PATIENTS ON HEMODIALYSIS

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Background: Much is still unknown about the clinical outcomes after below-the-knee (BTK) angioplasty for critical limb ischemia (CLI) in patients on hemodialysis (HD)

Methods: Between June 2004 and December 2008, Subjects were serial 69 patients (81 legs, 123 vessels) who underwent percutaneous transluminal angioplasty (PTA) for primary treatment of infrapopliteal lesions in CLI. Subjects were classified into two groups for comparative study of clinical outcomes: the patients on HD: HD group (35 patients, 45 legs, 71 vessels, 66±11 years) and without HD: No-HD group (34 patients, 36 legs, 52 vessels, 69±9 years).

Results: For patient and lesions characteristics, the HD group had a significantly higher percentage of patients with hypertension (91.4 vs. 67.6%, P<0.05) or insulin-requiring diabetes mellitus (49.4 vs. 26.4%, P<0.05).There was no significant difference in the percentage of patients with Rutherford category 5 or 6 (62.2% vs. 47.2%) or in the ratio of chronic total occlusion in target lesion morphology (74.6% vs. 75.0%).

In six-month clinical results, there was no significant difference in the rate of repeat PTA for the treated limb (28.9 vs. 11.1%) or major amputation (11.1 vs. 5.5%) between the two groups. However, the percentage of repeat PTA performed twice or more (13.3 vs. 0%, p=0.031) and all-cause death (17.1 vs. 0 %, p=0.012) in the HD group was significantly higher than in non-HD group. The HD group had a significantly lower rate of freedom from all-cause death, major amputation, or repeat PTA in six-month follow-up compared to the non-HD group, with HD group 51.4% and non-HD group 85.3% (logrank test p=0.003).

Conclusions: The six-month outcomes after BTK angioplasty for CLI showed limb salvage in HD patients to be fully acceptable. However, in contrast to the general population, two or more repeat revascularizations must be performed to achieve this.