

**Outcomes after PTA in ESRD Diabetic Patients**

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**Background:** Peripheral arterial disease (PAD) is common among diabetic patients with chronic kidney disease, and most of the diabetic patients with end-stage renal disease (ESRD) have PAD. Diabetes and renal disease are independent risk factors for PAD. ESRD is a strong risk factor for both ulceration and amputation in patient with diabetes. Renal failure independently predicts nonhealing of ischaemic foot lesion and major amputation. Primary amputation rates of 22% to 44% have been reported for ischaemic foot lesion in ESRD patients. The aim of this study was to assess the outcomes after percutaneous transluminal angioplasty (PTA) in diabetic patient with PAD and ESRD. **Methods:** The study cohort included 456 diabetic patients with foot ulceration and PAD who performed PTA because of a CLI. Patients were divided into two groups: those with ESRD (ESRD+) (n= 60) and those without (ESRD-) (n= 396). We report outcomes at twelve months as: alive without major amputation, alive with major amputation, death. **Results:** ESRD+ were younger ( $67.4 \pm 1.3$  vs  $70.7 \pm 0.5$   $p < 0.02$ ), had more ischemic heart disease (54 vs 39.9%  $p < 0.039$ ) and more risk factors (4 risk factors 36 vs 19%  $p < 0.0036$ ) than ESRD- patients. ESRD+ required re-PTA in a major number of occasion (30 vs 16%  $p < 0.0426$ ) and had technical failure after rePTA in a higher percentage (36.6 vs 5.13%  $p < 0.01$ ). Outcomes for ESRD+ and ESRD- patients respectively : alive without major amputation (60 vs 77,6%), alive with major amputation (18,33 vs 11,48%), dead (21,67 vs 10,97%) ( $\chi^2 = 0.0175$ ). **Conclusion:** Our data support endovascular treatment in ESRD diabetic patients. In comparison with published data on similar patients treated by open by-pass we found a reduced mortality (22 vs 38%), a similar percentage of patients alive without major amputation, but our results were obtained in all the population of patients and not only on the survivors, in addition our patients were consecutive patients and therefore unselected ESRD patients. In conclusion we consider endovascular revascularization as a first line treatment for CLI in diabetic patients with ESRD.