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Transmetatarsal and radius amputations in the diabetic foot: do they really improve survival and reduce progression to larger amputations? A 10-year follow-up analysis

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Introduction: The prevalence of diabetes mellitus (DM) has been increasing, reaching about 14% of adults in 2022. Among its complications, amputations stand out. Smaller amputations better preserve function, reduce energy expenditure and are associated with better quality of life and survival outcomes, although they have a higher rate of reinterventions. There are still gaps in survival, recurrence of diabetic foot ulcers (DFU) and progression to larger amputations. The objective was to evaluate survival after minor amputations and to analyze factors associated with recurrence, reamputations, and mortality.

Methods: Retrospective cohort (2013–2022) with 100 diabetic patients undergoing lightning or transmetatarsal amputations in a private tertiary hospital with more than one year of follow-up. Clinical data were collected with double checking. The primary outcome was survival (time between first amputation and death/last follow-up). Variables: age, sex, affected limb, recurrence, and number of ulcers, comorbidities (insulin-dependent DM, SAH, CKD, and PAD).

Results: Mean age 67.5 years; 75% men; mean follow-up 55.4 months. High burden of comorbidities (CKD 83%, SAH 50%). There were 21 deaths (20.4%), with a mortality of 8% in the first year; mean survival of 47.9 months and approximately 75% in 100 months. Among survivors, 53.2% had recurrence of DFU (often multiple). Reamputations occurred in 26%, with proximal progression; 6.67% of transmetatarsals evolved to transtibial amputation. In the univariate analysis, insulin-dependent DM (OR 3.08; p = 0.007) and PAD (OR 3.05; p = 0.014) were associated with recurrence; pad was also associated with mortality (OR 3.93; p = 0.005).

Conclusion: Smaller amputations showed good survival and low progression to higher levels, constituting an effective strategy for limb preservation. However, the high recurrence of ulcers and reamputations reinforces the need for continuous follow-up and a multidisciplinary approach.

Keywords: Amputations; Diabetes complications; Diabetic Foot.

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