

Modified resection arthroplasty for infected non-healing ulcers with toe deformity in diabetic patients

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Abstract

Background: Diabetic motor neuropathy is expressed as the loss of function and the contracture of the intrinsic muscle of the foot, leading to the classic claw toe deformity. This predisposes the foot to ulcerations on the dorsum or tip of the toes. The interdigital ulcer is easily formed over a condyle of the phalanx between toes in diabetic patient. These affected digits pose a high risk for the development of osteomyelitis and may necessitate toe amputation.

Methods: In this study, 72 toes (57 feet) with a toe deformity in the 2nd to 5th toe accompanied by chronically infected ulcers were involved. All patients underwent modified resection arthroplasty on the PIP or DIP joint depending on the ulcer location. Toes used for the study included the 2nd toe in 27 cases (38%), the 3rd toe in 11 cases (15%), the 4th toe in 19 cases (26%), and the 5th toe in 15 cases (21%). With the exception of four patients, all cases were identified as positive in a bacterial growth culture study including seven cases of MRSA. The mean period of time before follow-up was 28.7±8.1 months.

Results: The mean wound healing time was 25.6±6.2 days. Follow-ups indicated that there were three cases of additional toe amputation and no proximal spread of infection. No recurrence of claw toe or ulcer formation was identified during follow-ups.

Conclusion: we believe that modified resection arthroplasty for toe deformities accompanied by chronic infected ulcers in diabetic patients is a good treatment alternative to toe amputation.

Index words : Non-healing ulcer, Toe deformity; Osteomyelitis; Modified resection arthroplasty; Diabetes.