Fillet flap coverage for closure of diabetic foot amputation

Department of Orthopedic Surgery, Hallym University Sacred Heart Hospital
Jung Woo Lee, Hwan Ryu, Jae Yong Park

Purpose

Partial foot amputations are performed for recurrent or infected ulcers or osteomyelitis of the diabetic feet. Patients may require a large amount of bone resection for wound closure. However, this results in a more dysfunction of foot and longer time to heal. The authors describe fillet flap coverage to avoid more massive resection in selected cases. This study shows the results of fillet flap coverage for the closure of diabetic foot forefoot amputation.

Materials and Methods

This is a retrospective case series of patients who underwent forefoot and midfoot amputation and fillet flap for osteomyelitis or nonhealing ulcers between March 2013 to November 2017. Beside patient comorbidities, hospital days, complications, and duration to complete healing were evaluated.

Results

Fourteen fillet flap procedures were performed on 12 patients. Of those, 2 had toe necrosis, 9 had forefoot necrosis, and 3 had midfoot necrosis. Eleven forefoot amputation and three midfoot amputations were performed. Three patients had revision surgery for partial necrosis of flap, and two patients had additional amputation, among forefoot necrosis after fillet flap. Two patients had additional amputations among midfoot necrosis. By the fillet flap, the amputation size was reduced as much as possible. The mean initial healing day was 70.6, the mean complete healing day was 129.0, and the mean hospital stay was 60.0 days.

Conclusion

The fillet flap facilitates the restoration of normal foot contour and allows salvage of metatarsal or toe. This technique can avoid additional morbidity and facilitate limb salvage in diabetic foot infection.