

Surgical treatment of diabetic foot osteomyelitis.

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Background: Diabetic foot is one of the most important complications of diabetes and osteomyelitis of 1st metatarsal bone is a frequent infection in diabetic foot. Patients with wounds resulting from surgical debridement of diabetic foot osteomyelitis are at continued risk for development of potential amputation. The aim of this study was to evaluate the outcomes of skin grafting following surgical treatment of diabetic foot osteomyelitis.

Materials and Methods: We presented 86 diabetic foot cases with osteomyelitis of 1st metatarsal bone. These patients were treated in Smolensk Regional Hospital, General Surgery Department in 2009-2013. Fifty seven male (66,3%) and twenty nine female (33,7%) were included in this group. The mean age of the patients was 69±8 years. All the patients had diabetes II type. Surgical treatment included: resection, skin grafting during the stage of regeneration. Postoperative regimen included antibiotics by Amoxicillin/Clavulanic acid for 7 days, immobilization for 1 month and dressings with 1% Iodopiron (Povidone-Iodine+Potassium iodine). Part of the patients did not use recommended regimen. Follow-up period was 3, 6, 12 months. **Results:** After skin grafting wound healing was achieved between 8 and 12 weeks. Outcomes and complications are shown in the table:

Outcomes	Recommended regimen			Default cases		
	3 months	6 months	12 months	3 months	6 months	12 months
Surgical site infection	10 (11,6%)	6 (7%)	-	28 (32,6%)	11 (12,8%)	2 (2,3%)
Amputation (all the levels)	8 (9,3%)	6 (7%)	1 (1,15%)	25 (29,1%)	20 (23,3%)	11 (12,8%)
Recurrence of osteomyelitis	2 (2,3%)	-	-	5 (5,8%)	4 (4,65%)	2 (2,3%)

Conclusions: Success of wound healing after surgical intervention and following skin grafting in diabetic patients with osteomyelitis of 1st metatarsal bone depends on the treatment regimen the patient. Most complication cases were observed in patients who didn't use prolonged cast, special dressings and antibiotics after surgery.