

Necrotic-purulent forefoot lesion in diabetic foot: how to stop the ascending of suppurative process to tibia

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Aim. To demonstrate modern technologies including our original - Fasciotendotomy (FTT)- to cure infected diabetic foot. FTT enable us to prevent ascending purulent infection widespread proximally from forefoot to tibia along tendons. **Case report.** Two males (A and B) 45 and 55 years old with type 2 diabetes, 6 and 3 years duration, were admitted to hospital due to similar diabetes complication: neuropathic diabetic foot with wet forefoot gangrene, plantar phlegmon and with danger of ascending fasciitis (grade 4 after Wagner). There were no other complication. Patient A was operated 10 days before (amputation of fifth toe due to gangrene) with following developing above mentioned process. There were good peripheral pulses. Diabetes was decompensated on therapy by metformin and glyclaside. (fasting glycemia 8.4-11.9 mmol/l). Insulino- and antibioticotherapy were started. Because severe urgent situation on the next day after admittance patients were operated under epidural block: transmetatarsal forefoot amputation and plantar phlegmone debridement was performed after preceding fasciotendotomy. The essence of FTT is excision of 4-5 cm long piece of tendons of 3 muscle group: 1) m. tibialis anterioris, m.m. extensores digitorum and hallucis longi; 2) m. tibialis posterior, m.m. flexores hallucis longus and digitorum longus; 3) m. m. peronei longi and brevis.—to break the ways for ascending infection from foot to tibia. Besides, this procedure lowered subfascial pressure and, therefore, improve microcirculation . Three incisions (4 cm long) of skin and fascia were made from the level 2-3 cm above ankle-joint projection and continued along ankle and frontal surface of tibia; the wounds after FTT and amputation were left without sutures. Postoperatively management of infection, diabetes, microcirculation and neuropathy (alfa-lipoic acid, actovegin) was continued. Local wound care included debridement and stimulation of granulation using negative pressure wound therapy, iodine dressing and “plason” generated NO (plasma) in two regimes: as knife for debridement and as physiotherapy to improve microcirculation. After four weeks wound cleansing and good granulation were achieved and patients were discharged and as outpatient were cured to heal postoperative wounds by second tension. Weight-bearing function of foot were preserved. **Thus,** complex treatment including fasciotendotomy in severe cases of forefoot lesion enable us to prevent widespread infection to tibia and to decrease the rate of high lower leg amputation, to preserve leg function.