

Soft Tissue Infections in Diabetic Patients

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Abstract

Background: the patient with diabetes has an increased susceptibility to infections, with negative evolutionary potential leading to increased morbidity and mortality compared to the general population. The cause is the alteration of immune defense mechanisms, the hyperglycemic environment leading to alteration of neutrophil function, suppression of the antioxidant system and humoral activity, systemic micro and macroangiopathy, neuropathy, depression of antibacterial activity of the genitourinary and digestive tract. Infections localized at the soft tissue (skin, fascia and aponeurosis, subcutaneous tissue, muscles) in the diabetic patient require a complex medico-surgical approach in which aggressive surgical treatment should be complemented by metabolic balancing and sustained antibiotic therapy.

Materials and methods: these peculiarities will be exposed and analyzed in a retrospective descriptive study performed at the General Surgery Clinic ‘I. Juvara’ of the clinical hospital ‘Dr. I. Cantacuzino’, during the period of Jan. 2013- Dec.2017, which followed the type of lesions, their localization, the germs involved, the comorbidities, the biologic parameters, the antibiotic and surgical treatment as well as the postoperative evolution. The study does not include patients with localized infections in the diabetic foot, a particular pathological entity that will be analyzed separately in a separate study.

Results: 150 diabetic patients with soft tissue infections localized in the upper limb, calf, thigh, perineum, abdominal and thoracic wall were identified. The most frequent localization was found in the lower limb (54%). The incidence of these infections was higher in males (55%), and the most affected age group was 60-69 years (38%). Most patients had type II diabetes (93%). Among the associated comorbidities, cardiovascular diseases and obesity are the most common, explaining to a large extent the complicated evolution, potentially lethal of this pathology. From the bacteriological perspective, a plurimicrobial flora is identified, staphylococcus aureus being most frequently encountered. The antibiotic treatment was initiated immediately empirically, subsequently according to the antibiogram; the most commonly used antibiotic classes being cephalosporins and carbapenems. Surgical interventions were in their majority of debridement and necrectomy, but in a few cases limb amputation was necessary. In particular, the number of surgical interventions performed in the same patient and in the same hospital stay was between 1 and 7 interventions.

Conclusions: Soft tissue infections in the diabetic patient have a heterogeneous aspect with specific particularities requiring careful clinical examination, multidisciplinary treatment including rapid, serial surgical interventions to control the growing aggression of the germs involved. Fast and case-adapted therapeutic decisions, careful observation of the patient’s general condition and of the wound several times a day are essential to achieving favorable postoperative outcomes.

Key words: soft tissue infections, necrotizing fasciitis, diabetes mellitus, excisional debridement