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Modern Treatment of Patients with Purular Necrotic Forms of Diabetic Foot Syndrome

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Abstract. *Diabetes mellitus (DM) is one of the most common diseases of our time. Type 2 diabetes (T2DM) occurs in 2–6% of the adult population and reaches the figure of about 120 million people. According to forecasts by WHO experts, by 2025 the number of patients with type 2 diabetes will be over 250 million people. Epidemiological studies claim that the true number of patients with this pathology is 2-3 times more than officially registered at the dispensary.*

This is due to the fact that diabetes of the first type (T1DM) is a congenital disease and the diagnosis is verified with the patronage and the preserved standards of professional examinations in childhood; while T2DM occurs in adulthood in the absence of proper attention to the first signs of the disease and does not attract attention until complications develop. Statistical studies prove that in patients with type 2 diabetes, atherosclerotic lesions of the main arteries are found several times more often than in people of the same age who do not suffer from type 2 diabetes.

The treatment of diabetic micro- and atherosclerotic macroangiopathies and their complications occupies an important place in the everyday practical work of both surgeons and endocrinologists.

Keywords: *diabetes mellitus, purulent-necrotic form, diabetic feet.*

Introduction

Relevance. The incidence of diabetes mellitus is continuously increasing worldwide. Among the causes of high disability and mortality, diabetes mellitus firmly ranks third after cardiovascular and oncological diseases. Diabetes mellitus (DM) was recognized by WHO experts as a non-infectious epidemic of the XX century. The main reason for the high morbidity, hospitalization and mortality of patients with diabetes is the lesion of the lower extremities. According to the WHO definition, diabetic foot syndrome (DFS) is an infection, ulcer and/or destruction of deep foot tissues associated with neurological disorders and/or a decrease in the main blood flow in the arteries of the lower extremities

of varying severity.

The pathogenesis of the development of purulent necrotic forms of diabetic foot syndrome is based on diabetic neuropathy, micro- and macroangiopathy with impaired peripheral microcirculation, which increase the risk of gangrene of the lower extremities by 20 times. Gangrene, which develops as a consequence of SDS, ranks first among the causes of non-traumatic amputations of the lower extremities, which account for 50-70% of the total number of amputations of the lower extremities.

The peculiarity of the course of the wound process in patients with diabetes mellitus is manifested in the delay in the formation of granulation tissue and skin epithelialization, lengthening of the phases of inflammation and regeneration, inhibition of fibroblast proliferation and a decrease in the synthesis of DNA, glycoproteins and collagen.

The purpose of the study. Изучение эффективности способа комплексного лечения больных с гнойно-некротическими формами синдрома диабетической стопы

Materials and methods of research. The study was comparative in nature, included 20 patients with purulent-necrotic forms of diabetic foot syndrome on the background of type 2 diabetes mellitus, after minor amputations. All patients suffered from insulin-dependent type 2 diabetes mellitus. The duration of diabetes mellitus is from 8 to 15 years. On average – 10.2 years.

The results of the study and their discussion. The effectiveness of the treatment was determined by the severity of subjective symptoms in patients, the nature and amount of wound discharge, by the nature of changes in the cytogram from the wound surface – before the start of the complex treatment method, during its implementation and after the end of treatment. Cytological examination of the wound was performed on the 1st, 7th and 14th days after foot resection.

In all patients of the first group (n.10-100%), pain syndrome, a feeling of heaviness in the legs, pronounced edema and hyperemia persisted for up to 9-10 days. In 10 (100%) people of the second group, as a result of complex treatment, the pain syndrome was completely stopped in the feet already on the 5th day, which was the basis for the complete cancellation of analgesics. Also, on the 5th day from the start of treatment, the feeling of heaviness in the legs significantly decreased, swelling disappeared, foot hyperemia significantly decreased.

In 9 patients (90%) in the first group, the copious amount and nature of wound discharge persisted for up to 18-20 days.

In all patients of the second group (n.10-100%), a significant decrease in the amount of wound discharge was noted already on the 7th-10th day.

A persistent transition of the wound process to the second phase was noted in all people (n.10-100%) of the first group on average for 21 days, and in the second group – also in all patients (n.10-100%), but already on the 10th day from the start of treatment.

In the first group of patients, the number of repeated necrectomies averaged 2.8. And in group 2 patients, they were not needed.

The inflammatory type of cytogram in patients of the first group decreased by only 11.8 + 1.6%, this happened on day 14. And in the second group – decreased by 88.9 + 1.2%. At the same time, a significant decrease in the inflammatory type of cytograms (5 people – 50%) was noted already on the 7th day after surgery.

The inflammatory-degenerative type of cytogram in the first group of patients decreased by 10.6 + 1.2%, on day 14. And in the second group – decreased by 86.6 + 1.3%. This was noted already on the 7th day after minor amputation of the foot due to purulent-necrotic forms of the syndrome "Economy and Society" No. 4(71) 2020 www.iupr.ru 610 diabetic foot.

On the 14th day from the start of treatment, the regenerative type of cytogram was noted only in 2 patients of the first group (20%). At the same time, this was found in all patients (n.10-100%) in the

second group. And in 2 patients of the second group (20%), the regenerative type of cytogram was noted already on day 7.

Conclusions:

Thus, in the treatment of purulent-destructive lesions of the lower extremities of patients with diabetes mellitus, a comprehensive therapeutic and diagnostic program should be used. The use of modern diagnostic methods for micro-macroangiopathy allows for a differentiated approach to solving the problem of the nature of surgical treatment and the level of limb amputation, with the implementation of reconstructive angiosurgical interventions on the main arteries. It is recommended to include ozone therapy and plasma erythrosorption in the complex treatment of purulent-necrotic lesions of DS. Systemic ozone therapy reduces the duration of inpatient treatment by 7 days and the percentage of high amputations to 23.6%, the use of plasma erythrosorption reduces the number of complications arising during treatment by 12.3% and reduces the number of repeated operations by 15%.

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