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EFFICACY OF TOPICAL APPLICATION OF FARGALS IN THE TREATMENT OF SURGICAL SOFT TISSUE INFECTION

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Abstract

Purulent surgical diseases of the skin, subcutaneous fatty tissue, muscles and fascia occupy a large share among applications for surgical care in outpatient and polyclinic institutions. The purulent process that develops in diabetes tends to spread rapidly, with extensive necrotic process developing . Due to decreased

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immunity, inflammation often becomes destructive. Mutations of microorganisms lead to the development of antibiotic-resistant forms, which is accompanied by progression and aggravation of the course of diabetes mellitus. Mutations of microorganisms lead to the development of antibiotic-resistant forms, which is accompanied by progression and aggravation of the course of diabetes mellitus. The development of surgical infection in this category of patients runs with various forms of sepsis manifestations. In this regard, it is necessary to start complex treatment from early clinical manifestations, which should include local treatment timely surgical treatment, followed by local management of the wound process. This work is devoted to the study and evaluation of the results of FarGALS drug application in surgical infection in diabetic patients.

Keywords: Diabetes mellitus, surgical infection, purulent wound.

Introduction

Purulent surgical diseases of the skin, subcutaneous fatty tissue, muscles and fascia occupy a large share among applications for surgical care in outpatient and polyclinic institutions. Despite the treatment of these diseases, complications and progression of the process often develop, which is the result of changes in the reactivity of the organism and leads to generalization of infection, in which septic manifestations of varying severity develop [1-6].

Local treatment of purulent-necrotic diseases of soft tissues nowadays, with the emergence of antibiotic-resistant microflora, requires the attention of both surgeons and clinical pharmacologists. Taking into account the shortcomings of used antiseptics in purulent surgery began to use topical forms of antibiotics. The emergence of antibiotic-resistant forms of pathogens of surgical infections leads to extensive purulent-necrotic wounds and progression of surgical infection. Diabetes mellitus is accompanied by a decrease in the resistance of the body,

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which is accompanied by a sterile clinical picture and this is the reason for the emergence of neglected forms of purulent pathology [7-9].

Acute purulent surgical disease in diabetes mellitus is a complex problem of practical medicine and requires improvement of diagnostic and treatment methods. In recent years, there has been a rapid increase in patients with diabetes mellitus, which accounts for 4-5% of the world's population. According to forecasts in the next 5-10 years mortality from complications of diabetes mellitus will increase and may become one of the top ten causes of death in the world. [10,11]. Against the background of diabetes mellitus in purulent inflammatory diseases prevails the presence of necrosis zone, which leads to an increase in endogenous intoxication.

Acute purulent surgical infections, which often occur among emergency surgical diseases, against the background of diabetes mellitus proceed with certain peculiarities [12,13,14]. Low effectiveness of treatment in purulent-necrotic diseases is often associated with a decrease in anti-infective resistance of patients suffering from diabetes mellitus, which is promoted by the violation of local tissue reactions, suppression of immune mechanisms of regulation of wound reparative process. The resulting vicious circle in diabetes mellitus can interrupt only surgical operation with removal of the pathologic focus, and local treatment of wounds.

The aim of the work is to study the possibility of application and effectiveness of FarGALS preparation for local treatment of wounds in complex treatment of patients with surgical infection against the background of diabetes mellitus.

II. Material and methods

To fulfill the set goal, we studied the results of treatment of 58 patients with various purulent surgical pathologies in patients with diabetes mellitus, the majority of whom had type II diabetes mellitus.

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In the studied group by age from 51-60 years there were 50% of patients, 61 and above - 25.9%, 5.6% of patients were young and 18.5% of middle age. Distribution by sex - women made up 63.7% (37 patients) and men 21 (36.3%.) Phlegmons of various localizations were more common among patients, 32.7% and abscesses in 17.2% of cases. Carbuncles were detected in 12% of cases, and less often paraproctitis, hydroadenitis.

All patients after a short preoperative preparation underwent surgical treatment - opening of the purulent focus, necrectomy within healthy tissues. In the study group 61 surgical interventions were performed, of which most of all necrectomies were performed in 23 (37.7%) cases. In 21 (34,4%) patients phlegmon dissection and in 8 patients (13,1%) abscess dissection was performed (Table №1).

Nature of performed surgical interventions in patients with purulent surgical diseases of various localizations

Table No. 1

Type of operation	study group	
	quantity	%
Boil dissection	2	3,3
Carbuncle dissection	3	4,9
Opening an abscess	8	13,1
Dissecting phlegmons	21	34,4
Necrectomies	23	37,7
Paraproctitis dissection	2	3,3
Dissecting the hydroadenitis	2	3,3
Total	**61**	**100**

At the time of admission due to the presence of a pronounced purulent necrotic inflammatory process, all patients had symptoms of general body intoxication.

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From the clinical parameters the patients had tachycardia up to 108□2,0 beats/minute, HR increased 27□3,0 times per minute, hyperthermia up to 39,2□0,6 °C, from the laboratory parameters leukocytosis (16,0□0,7*109) with a pronounced shift to the left, and LII was at the level of 4,76□0,4. Against the background of high toxemia (OSM 325□6,2), the patients showed signs of hypoproteinemia with a decrease in total protein to 56□2,6 g/l. Hyperglycemia was observed in patients, blood sugar level was within 14,1□1,9 mmol/l.

The microbiologic picture in the studied patients showed that staphylococcus aureus was detected in 59,45±3,9% of the examined patients, of them monoculture - in 61,3±2,5%, and in 26,0±2,4% of cases polymicrobial flora was detected. Escherichia coli was detected in 15.82±1.2% of the cultures, synegus coli in 13.4±1.2%, protheus in 4.8±0.1%, and streptococcus in 1.86±0.02%.

Results and discussion

Analysis of the results of the use of topical application of FarGALS showed that there was an increase in antibiotic sensitivity of microorganisms to antibiotics. The study of the results of bacteriologic research showed that up to 42,3% of patients after FarGALS application had no growth of microflora in the wound. On the 3rd day of treatment this index reached 86,1 %, and according to the results of bacteriological sowing pathogenic microflora in the postoperative wound was not isolated.

When analyzing the results of microbiological picture showed that on the 1st day only polyculture was detected, the picture of which changed depending on the period of observation and on the 3rd day monoculture was detected in 4 cases, and the content of tri- and polycultures progressively decreased. On the 7th day of treatment the results of bacteriologic study showed that there was no growth of microflora.

Despite the rapid cleansing of the wound by surgery and the use of FarGALS, and complex treatment in the dynamics showed changes in the degree and

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frequency of septic manifestations gradually with the predominance of SSVR occurring against the background of the sanitized pathologic focus.

According to the results of treatment, the following conclusion can be made: 26 patients (44.8%) were discharged with good results, when the inflammatory focus was completely eliminated and the ability to work was restored. Satisfactory results were manifested by partial restoration of the ability to work. It was revealed in 28 patients (48.3%). When patients underwent repeated surgical interventions and lost their ability to work, these were the patients classified as unsatisfactory results of treatment. In our study there were 4 of them, which amounted to 6.9%.

Analyzing the terms of wound healing in the patients of the main group it was noted that the duration of phase I was 2,6±0,5 days, phase II - 5,9±0,3 days, and phase III - 9,1±0,6 days. At the same time the duration of hospital treatment was 10,3±0,7 days.

Conclusion

Thus, the use of FarGALS in the treatment of purulent diseases in endocrine disorders allows to achieve the following results: suppression of the growth of microorganisms in the wound process, reduction of signs of perifocal inflammation, which leads to accelerated healing. It would be desirable to note that its application twice a day allows to accelerate the processes of reparation and reduce the time of patients' stay in the hospital

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