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SURGICAL INFECTION OF SOFT TISSUES ON THE BACKGROUND OF DIABETES MELLITUS – WHAT IS THE REASON FOR MAINTAINING UNSATISFACTORY RESULTS?

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Annotation. Despite the rapid development of all spheres of healthcare, with the introduction of new methods of diagnosis and treatment, the problem of treating patients with various forms of surgical infection has not lost its relevance. Moreover, the contingent of severe forms of surgical soft tissue infection is increasing. The paper analyzes the main causes of the progression of surgical infection of soft tissues, focusing on the development of this pathology in patients with diabetes mellitus. The authors characterize the identified shortcomings in the treatment of patients with this pathology and indicate the necessary therapeutic and diagnostic measures. The work is based on the analysis of 795 patients over a five-year follow-up period.
Keywords: systemic inflammatory reaction syndrome, surgical infection of soft tissues, diabetes mellitus.

Relevance. The development of surgical infection of soft tissues in patients with diabetes mellitus is the main cause of the aggravated course of the underlying disease, with the development of septic complications and death [2,9,11,14]. The treatment of surgical diseases developing or occurring against the background of diabetes mellitus is one of the important issues of modern surgery. The urgency of the problem is largely due to the fact that the incidence of diabetes is progressively increasing. Operations for acute purulent diseases in patients with diabetes mellitus account for 6 to 25% of the total number of all surgical operations performed in this group of patients, and infectious complications from the surgical wound in patients with diabetes mellitus account for up to 38% [1, 4, 6,16].

In the system of care for this category of patients, both outpatient and inpatient units suffer. In many cases, care for these patients begins with a surgical hospital, when the process in soft tissues is widespread and patients develop septic phenomena with multiple organ failure [3, 8, 11,13].

Surgical infection and diabetes mellitus, occurring simultaneously, differ in a number of features. A minor purulent focus causes a violation of all metabolic processes, leads to insulin deficiency, progression of diabetes mellitus and its decompensation. On the other hand, metabolic disorders, slowing down the regeneration and repair of tissues, complicate and worsen the course of the inflammatory process, contribute to its spread and generalization. At the same time, among the deceased who suffered from diabetes mellitus, infectious processes caused death in almost 25% of patients [5, 7, 10,15].

The aim of the study was to analyze the causes of unsatisfactory treatment results in patients with surgical soft tissue infections that developed against the background of diabetes mellitus.

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Material and methods. The work is based on a five-year analysis of the results of treatment of patients in the department of purulent surgery and surgical complications of diabetes mellitus at the multidisciplinary clinic of the Tashkent Medical Academy, where 795 patients with diabetes mellitus who developed purulent surgical diseases of soft tissues of various localization were treated during this period.

The most common were extensive phlegmons of various localization, which were noted in 306 cases and amounted to 38.5%. Erysipelas was less common in 135 patients and carbuncles in 115 patients. Limited purulent processes were noted in 156 patients, while these were abscesses of various localization in 10.9% of cases, acute paraproctitis in 6.3% and mastitis among 2.4% of patients. A significant place among this contingent was extensive putrefactive processes in the perineum and scrotum, which were detected in 83 patients.

Before admission to the Center, the vast majority of patients were operated on, and 60% of patients were operated on twice, 25% of patients were operated on once, in a smaller number of patients were operated on 3 times 12% and repeatedly in 3% of cases.

Patients were treated for an average of 7 to 14 days before admission in 65% of cases, a quarter (107 – 23%) of patients received treatment at the place of primary treatment for more than 14 days and patients (54 – 12%) who were treated for up to 7 days were less often admitted.

Results and discussions.

An analysis of the causes of unsatisfactory treatment showed that one of the common causes (70.7%) was late diagnosis, when, against the background of uncompensated carbohydrate metabolism, subjective reasons associated with fear of patients, and erasure of the clinical picture, patients lack classic signs of a typical inflammatory process.The next reason for negative results was inadequate surgical interventions (67%), when small incisions were made, with drainage and emptying of the abscess without adequate necrectomy. At the same time, a pathological focus remains in the wound, which is a source of further progression of the pathological process with generalized introduction of endotoxins into the bloodstream. One of the serious drawbacks in the treatment of patients with this pathology is the underestimation of the depth of tissue damage. We noted this factor in 43% of cases when the presence of a purulent process in one anatomical area led to damage to underlying structures that could not be diagnosed with small incisions.

A significant place in the treatment of these patients was occupied by errors in the conduct of antibacterial therapy, which were detected in 87.5% of cases. These include:

1. underestimation of the dose of the administered drug and the frequency of administration. Each case of antibiotic use leads to a significant increase in the risk of antibiotic resistance of microorganisms and the spread of resistant bacteria in the population (Yeryukhin I.A. 2001), which requires subsequent second-line antibiotic therapy;

2. the use of one antibiotic without taking into account sensitivity, when both aerobic and anaerobic microorganisms are sown in patients of this category, both in a pathological focus;

3. the use of several antibiotics without taking into account the principles of preventive antibacterial therapy. From the standpoint of treatment tactics, it is advisable to distinguish empirical and targeted antibacterial therapy (Dobrokhotova Yu.E. 2005). Empirical antibacterial therapy is based on data on polymicrobial etiology involving aerobic-anaerobic microorganisms and fungi. Effective control of these pathogens can be provided with the help of combined antibacterial therapy or by prescribing monotherapy. Early initiation of empirical antibacterial therapy with a broad-spectrum antibiotic followed by a change to a more narrow-acting drug in

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accordance with the isolated bacterial pathogen (de-escalation) is the standard for the management of patients with surgical soft tissue infections;

4. underestimation of the role of pathogenic fungi in the development of generalization of the process, ignoring antimycotic therapy;

Errors in the postoperative management of patients occupy a special place. The identified disadvantages include:

1. carrying out dressings without taking into account the phase of the wound process and the severity of the purulent-necrotic process, when it is necessary to strictly differentiate the means used for local treatment and take into account the multiplicity of dressings performed;

2. postoperative management of wounds by secondary medical personnel;

3. underestimation of the possibilities of using biological, chemical and physical methods of rehabilitation;

Conclusions.

Thus, the modern approach to the treatment of purulent surgical infection in patients with diabetes mellitus is based on the following provisions: the purulent process developed in patients with diabetes mellitus sharply aggravates the course of the underlying disease, which requires timely diagnosis with active surgical tactics; minimal surgical intervention is not effective enough in the treatment of purulent complications in patients with diabetes mellitus; the course of the purulent process in these patients has pronounced features: acute violent atypical course, a tendency to pronounced spread of the purulent process, with the development of septic complications, frequent development of necrosis and prolonged course; postoperative administration should be strictly differentiated, depending on the phase of the course and the level of soft tissue damage;

References.

1. Гринев М.В., Будько О.А., Гринев К.М. Некротизирующий фасциит: патофизиологические и клинические аспекты проблемы. Хирургия 2006; №5. С. 31 – 37.
2. Лещенко И.Г., Галкин Р.А. Гнойная хирургическая инфекция. Самара, 2003; – 189с.
3. Столяров К.А., Новосрадян А.С., Батаков З.А. и др. Рожистое воспаление. Самара, 2000; С.5 – 6.
4. Шляпников С.А. Хирургические инфекции мягких тканей — старая проблема в новом свете. Инфекция в хирургии. 2003; №1. С. 14—22.
5. Бубнова Н.А., Шляпников С.А.. Инфекции кожи и подкожной клетчатки. - Хирургические инфекции. Рук. Под ред. Ерюхина И. А., Гельфанда Б. Р., Шляпникова С. А., СПб.: 2003; 379-409.
6. В.Г. Гавриленко, С.Б. Фадеев, О.В. Бухарин и др. Микробиологические особенности течения гнойно-воспалительных процессов мягких тканей у больных сахарным диабетом. Вестник хирургии. 2001; Т. 160. №6. С.39-41.
7. Еровиченков А.А. Современные аспекты терапии рожи: научное издание. Клиничическая фармакология и терапия. 2005; №2. С. 73-77.
8. Ерюхин И. А. и др. Протоколы диагностики и лечения сепсиса и анаэробной инфекции. СПб, 2001; 18с.

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ISSN (E): 2942-1918 Open Access| Peer Reviewed

9. Жафаров Х.М. Способ лечения гнойно-воспалительных заболеваний у больных сахарным диабетом. Паллиативная медицина и реабилитация. 2002; №2 С. 113-114.

10. Канорский И. Лечение флегмонозно - некротической рожи. Врач. №2. 2004; С. 35-36.

11. Доброхетова Ю.Э. Моксифлоксацин в лечении воспалительных заболеваний органов малого таза. Фарматека. №2. 2005; С. 23-25.

12. Fink S. Necrotizing fasciitis: pathophysiology and treatment. Dermat. Nursing. 2002; Vol. 14, № 5. P. 324-327.

13. Nicols R.L., Florman S. Clinical presentations of soft-tissue and surgical site infections. Clinical Infectionus Disease. 2001; 33 (Suppl. 2). P. 84-93;

14. Касимов У.К. ФарГАЛС при лечении некротических ран мягких тканей на фоне СД/Раны и раневая инфекция/18-19 мая 2023/С.51-53;

15. Касимов У.К., Охунов А.О., Абдурахманов Ф.М. Fargals in the treatment of necrotic infections of soft tissues on the background of diabetes mellitus/ 02.2023;

16. Касимов У.К., Моминов А.Т., Султанова Д.У., Атажонов Т.Ш. Фазовое лечение некротических инфекций мягких тканей на фоне сахарного диабета/ Vol. 2, No. 4, С.59-66

17. Матмуратов, К. Ж. (2023). Разработка методов лечения нейроишемической формы диабетической остеоартропатии при синдроме диабетической стопы.

18. Бабаджанов, Б. Д., Матмуротов, К. Ж., Моминов, А. Т., Касымов, У. К., & Атажанов, Т. Ш. (2020). Эффективность реконструктивных операций при нейроишемических язвах на фоне синдрома диабетической стопы.

19. Бабаджанов, Б. Д., Матмуротов, К. Ж., Саттаров, И. С., Атажанов, Т. Ш., & Саитов, Д. Н. (2022). РЕКОНСТРУКТИВНЫЕ ОПЕРАЦИИ НА СТОПЕ ПОСЛЕ БАЛЛОННОЙ АНГИОПЛАСТИКИ АРТЕРИЙ НИЖНИХ КОНЕЧНОСТЕЙ НА ФОНЕ СИНДРОМА ДИАБЕТИЧЕСКОЙ СТОПЫ (Doctoral dissertation, Rossiya. Кисловодск).

20. Бабаджанов, Б. Д., Матмуротов, К. Ж., Атажанов, Т. Ш., Саитов, Д. Н., & Рузметов, Н. А. (2022). Эффективность селективной внутриартериальной катетерной терапии при лечении диабетической гангрены нижних конечностей (Doctoral dissertation, Узбекистон. тошкент.).

21. Duschanbaevich, B. B., Jumaniyozovich, M. K., Saparbayevich, S. I., Abdirakhimovich, R. B., & Shavkatovich, A. T. (2023). COMBINED ENDOVASCULAR INTERVENTIONS FOR LESIONS OF THE PERIPHERAL ARTERIES OF THE LOWER EXTREMITIES ON THE BACKGROUND OF DIABETES MELLITUS. JOURNAL OF BIOMEDICINE AND PRACTICE, 8(3).

22. Duschanbaevich, B. B., Jumaniyozovich, M. K., Saparbayevich, S. I., Abdirakhimovich, R. B., & Shavkatovich, A. T. (2023). COMBINED ENDOVASCULAR INTERVENTIONS FOR LESIONS OF THE PERIPHERAL ARTERIES OF THE LOWER EXTREMITIES ON THE BACKGROUND OF DIABETES MELLITUS. JOURNAL OF BIOMEDICINE AND PRACTICE, 8(3).

23. Матмуротов, К., Парманов, С., Атажанов, Т., Якубов, И., & Корихонов, Д. (2023). ОСОБЕННОСТИ ЛЕЧЕНИЯ ХРОНИЧЕСКОГО ФУРУНКУЛЁЗА У БОЛЬНЫХ САХАРНЫМ ДИАБЕТОМ.