



SURGICAL TREATMENT OF PURULENT-NECROTIC SOFT TISSUE COMPLICATIONS IN PATIENTS WITH DIABETES MELLITUS AND DIABETIC FOOT

Sayfulla Abdullaevich Abdullaev
D.M.S. Professor
Samarkand State Medical University

Article history:	Abstract:
Received: December 10 th 2022 Accepted: January 10 th 2023 Published: February 14 th 2023	According to the literature, the incidence of diabetes mellitus has been increasing in recent years. In the developed countries of the world up to 5-6% of the population suffer from complications of diabetes mellitus. Complication with surgical infection in diabetes mellitus accounts for up to 30-40% of all surgical patients.
Keywords: diabetic foot, purulent-necrotic wounds, diabetes mellitus, fasciitis	

RELEVANCE. Various lesions of the feet occur in 25% of diabetic patients, of which 15% develop against a background of ulcerous and necrotic forms, leading to amputation of the lower limbs. Diabetic patients are 17 times more likely to develop gangrene of the toes and feet than non-diabetic patients.

Currently, up to 60% of non-traumatic amputations are performed in patients with a complication of diabetes mellitus.

Given the above data, early diagnosis and urgent surgical care of patients suffering from complications of diabetes mellitus is an urgent problem of clinical surgery.

PURPOSE OF WORK: Optimization of complex methods of surgical treatment of purulent-necrotic soft tissue complications.

MATERIALS AND METHODS OF RESEARCH: 84 patients with purulent-septic inflammatory processes of soft tissues of diabetes mellitus and diabetic foot, complicated by necrotizing fasciitis, were hospitalized at the Samarkand City Medical Association and the multidisciplinary clinical base of SamSMU. There were 47 men and 37 women. The age of the patients ranged from 24 to 78 years.

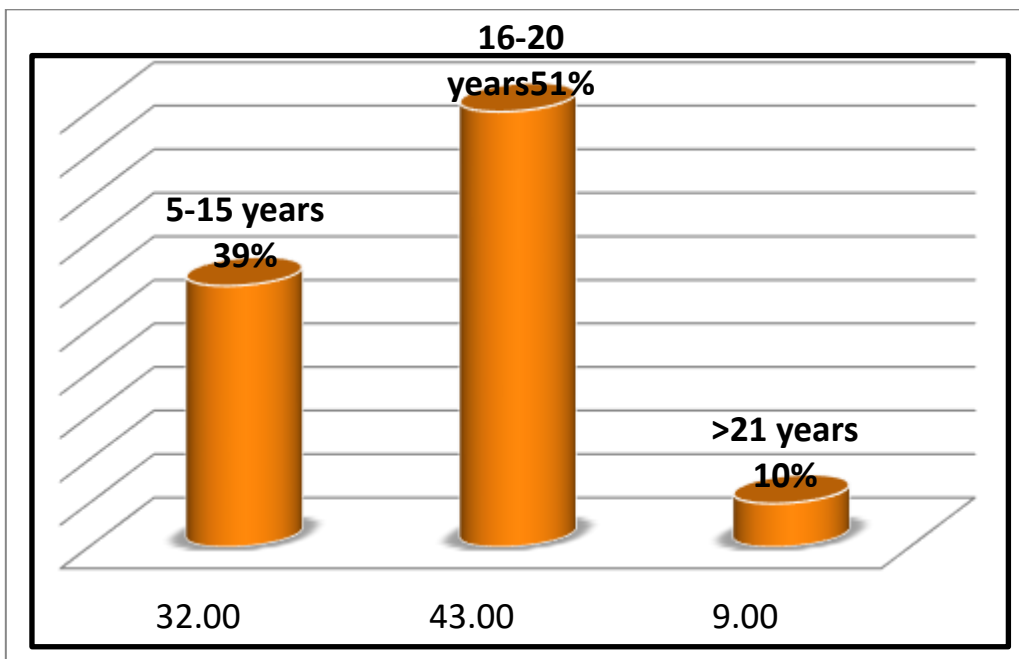
Timely diagnosis of purulent-necrotic complications of soft tissues and diabetic foot is the key to success in the treatment of this pathology. An endocrinologist is

necessary for part of the diagnosis, a neurologist determines the level and degree of somatic disorders, an angio-surgeon has a role in determining the degree and level of limb arterial vascular lesions, a surgical infection specialist determines the complex surgical treatment and an intensive care specialist helps in the organization of intensive care. The therapist pays close attention to the overall condition of the patients.

To clarify the degree of macro- and microvascular lesions. All patients were subjected to ultrasound, radiological (limb and chest radiography), Doppler examination. If necessary, CT and MSCT. As well as laboratory, bacteriological studies of purulent wounds and immunological monitoring were performed.

The causes of purulent-necrotic soft tissue inflammation were: diabetes mellitus type 1 and 2, severe form with diabetic foot syndrome, paraproctitis, perineal phlegmon, Fournier disease, purulent bartholonitis, phlegmon of upper and lower extremities, deep post-injection abscesses, postoperative wound suppuration, complications of phlegmon of anterior abdominal wall, phlegmon of hernia sac.

Diabetic history in these patients averaged 14±2 years. Thirty-two patients had been diabetic for 5 to 15 years, which was 39%. 43 patients had a diabetic history of 16 to 20 years, which was 51%. The remaining 9 patients had a diabetic history of more than 21 years, (10%). However, despite a long diabetic history, these groups of patients were very late to see a doctor.

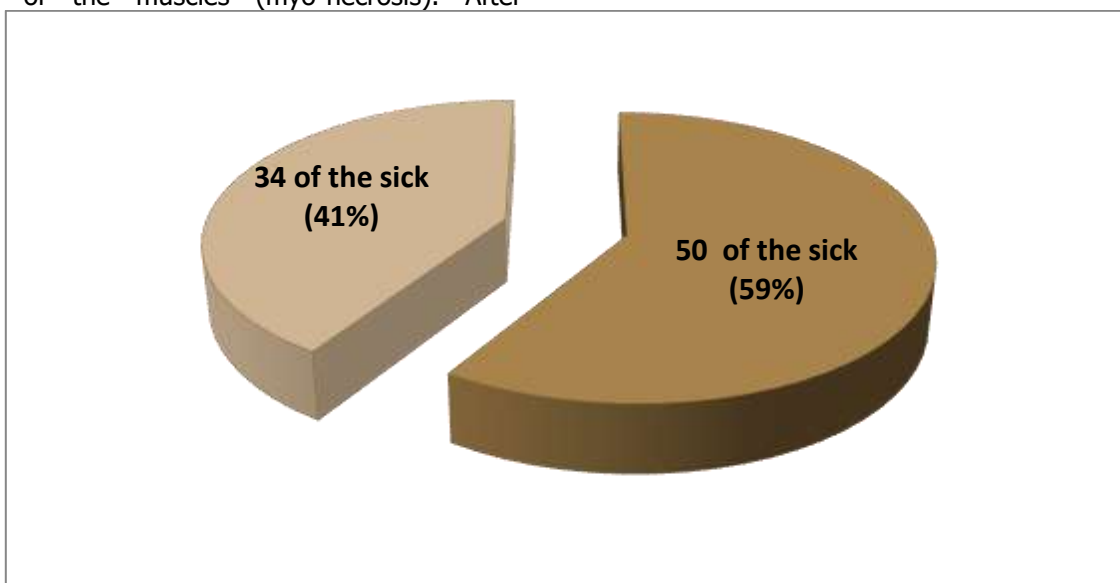


Diabetic history of patients.

Scheme N-1

When fasciitis develops, the superficial fasciae of the subcutaneous fatty tissue are the first to be affected. In this stage of the disease, the primary signs do not appear, and there are certain difficulties in diagnosis. In necrotic fasciitis massive edema, local pain and signs of intoxication appear. If the purulent necrotic process is localized in the foot and toes, the purulent process spreads upwards through the fasciae and the synovial membrane of the muscles (myo-necrosis). After

appropriate preoperative preparation, wide incisions were urgently opened. At the opening of the phlegmon, abscess far from the soft tissue infiltrate in the depth of the wound viscous character, yellowish-gray colored purulent masses with a specific andhorose odor were revealed. Sepsis was detected in 34 patients. Fifty patients had normal course of purulent inflammatory processes of soft tissues without sepsis phenomena.



without sepsis
 with sepsis

The course of purulent inflammatory processes of soft tissues. Scheme N-2



DISCUSSION AND RESULTS OF THE WORK.

In recent years, when choosing a method of surgical treatment of patients with purulent-necrotic complications of diabetes mellitus, we take into account the nature and prevalence of inflammatory process of soft tissue. The causative agents of purulent-necrotic soft tissue phlegmon, especially complicated by necrotizing fasciitis can be various microorganisms: - streptococci, staphylococci, enterococci, E. coli and other obligate anaerobes. Local clinical signs of necrotizing fasciitis have their own characteristics, specific local signs on the skin were not determined visually. A feature of the course of necrotizing fasciitis is purulent process of subcutaneous tissue, spreads through the fascia and develops a putrefactive-necrotic process in the fascia and passes to the underlying muscles (myonecrosis). We observed a group of patients who were admitted to the hospital late, their condition was severe and clinical signs of sepsis were revealed.

In our observations we found out that patients with acute paraproctitis complicated by perineal facetites, large phlegmon of anterior abdominal wall, purulent-necrotic phlegmon of fingers and feet applied to the hospital late. This group of patients often developed sepsis. Ultrasound is a highly informative diagnostic method for localization of soft tissue purulent process, its size, depth of involvement.

The treatment of necrotizing fasciitis requires timely, early radical surgical intervention: full surgical incision, wound sanitation, adequate drainage. All our patients underwent timely surgical treatment, i.e. paraproctitis was opened with wide incisions, phlegmons of the thigh and lower leg with removal of necrotic tissues with long incisions. In some cases it is impossible to perform a complete necroectomy due to the severity of the condition. Therefore, in the postoperative period we performed staged necroectomies with adequate drainage in severe patients from 3 to 10 times. If there was a complication of anaerobic phlegmon we made incisions of the <<lampage>> nature. Wounds were treated with hydrogen peroxide solution, thorough sanitation, necroectomy if possible and wound drainage were performed. If in the postoperative period there develops temperature increase, tachycardia, pains in the postoperative wound area, there is no special improvement of the patients' general state - it is an indication for the repeated wound revision to search for the source. A control ultrasound scan revealed a fluid mass deep in the soft tissues around the wound. In some cases when the above studies are not possible,

we used puncture methods of examination around the wounds. Wound dilation was performed when soft tissue fluid was detected.

CONCLUSIONS:

In the treatment of purulent-necrotic soft tissue complications in diabetes mellitus, early diagnosis, comprehensive adequate surgical treatment with staged necroectomy is considered the most optimal treatment.

LITERATURE

1. Azimov S.I., Mukhtarov Sh.T., Khamdamov B.Z. Monitoring Symptoms of Lower urinary tract and other features of benign hyperplasia of prostate in patients with tuberculosis. *European Journal of Molecular&Clinical Medicine* ISSN 2515-8260. Volume 07, Issue 03, 2020. P-1534-1540.
2. Khamdamov B.Z. Indicators of immunocytocine status in purulent-necrotic lesions of the lower extremities in patients with diabetes mellitus. *American Journal of Medicine and Medical Sciences*, 2020 10(7) 473-478 DOI: 10.5923/j.ajmm.2020.- 1007.08 10.
3. M. I. Kamalova, N.K.Khaidarov, Sh.E.Islamov, Pathomorphological Features of hemorrhagic brain strokes, *Journal of Biomedicine and Practice* 2020, Special issue, pp. 101-105
4. Kamalova Malika Ilkhomovna, Islamov Shavkat Eriyigitovich, Khaidarov Nodir Kadyrovich. Morphological Features Of Microvascular Tissue Of The Brain At Hemorrhagic Stroke. *The American Journal of Medical Sciences and Pharmaceutical Research*, 2020. 2(10), 53-59
5. Khodjjeva D. T., Khaydarova D. K., Khaydarov N. K. Complex evaluation of clinical and instrumental data for justification of optive treatment activities in patients with resistant forms of epilepsy. *American Journal of Research. USA.* № 11-12, 2018. C.186-193.
6. Khodjjeva D. T., Khaydarova D. K. Clinical and neurophysiological characteristics of post-insular cognitive disorders and issues of therapy optimization. *Central Asian Journal of Pediatrics*. Dec.2019. P 82-86
7. Sadridin Sayfullaevich Pulatov. (2022). Efficacy of ipidacrine in the recovery period of ischaemic stroke. *World Bulletin of Public Health*, 7, 28-32.



8. 8.Tukhtarov B.E., Comparative assessment of the biological value of average daily diets in professional athletes of Uzbekistan. *Gig. Sanit.*, 2010, 2, 65–67.
9. Исмоилов, О., Камалова, М., Анваршед, Т., & Махмудова, С. (2021). Кратко об анатомо-физиологических особенностях стопы и применение некоторых комплексных упражнений для устранения плоскостопия. Збірник наукових праць SCIENTIA. вилучено із <https://ojs.ukrlogos.in.ua/index.php/scientia/article/view/9999>
10. Ergashovich, K. B., & Ilhomovna, K. M. (2021). Morphological Features of Human and Rat Liver and Biliary Tract Comparisons (Literary Review). *International Journal of Discoveries and Innovations in Applied Sciences*, 1(4), 27–29.
11. Камалова, М., Исмоилов, О., Азимова, А., Бекмуродова, Д., & Исматова, С. (2021). Варианты конституции тела человека. Збірник наукових праць scientia.
12. Маматкулов Б., Камалова М., Аширов М. Причины, механизмы повреждения, основные типы переломов пяточной кости //Збірник наукових праць SCIENTIA. – 2021.
13. DJuraev, A. M., & Khalimov, R. J. (2020). New methods for surgical treatment of perthes disease in children. *International Journal of Psychosocial Rehabilitation*, 24(2), 301-307.
14. Dzhuraev, A., Usmanov, Sh., Rakhmatullaev, H., & Khalimov, R. (2021). Our experience with surgical treatment of congenital elevation of the scapula in young children. *Medicine and Innovations*, 1(4), 37-44.