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RECOVERY OF PURULENT INJURIES ON THE BACKGROUND OF A DIFFUSE TOXIC GOITER IN COMBINATION WITH DIABETES MELLITUS

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ANNOTATION

Purulent surgical diseases against the background of endocrine pathologies remains an urgent problem. The course of this pathology against the background of diffuse toxic goiter with a combination of diabetes mellitus negatively affects the outcome of the disease.

Key words: Purulent wounds diffuse toxic goiter, diabetes mellitus.

RELEVANCE

Treatment of purulent surgical diseases against the background of diabetes mellitus is an urgent problem of surgery [1; 2; 4]. With a combination of concomitant severe diseases, endocrine pathologies such as diabetes mellitus and diffuse toxic goiter, it changes the treatment of patients with purulent surgical diseases of soft tissues [5].Many directional deviations from the norm in this pathology in the body, including disorders of carbohydrate, mineral, protein metabolism, directly negatively affect the reparative processes in the body, which is the main thing in the treatment of purulent diseases of soft tissues [3; 6; 7].

PURPOSE OF THE WORK

To study the features of the clinical course of purulent surgical diseases of soft tissues against the background of diffuse toxic goiter and in combination with diabetes mellitus.

Study of clinical and laboratory features of the course of purulent wounds against the background of diffuse toxic goiter and in combination with diabetes mellitus.

Materials and Methods: The data of examination and treatment of 88 patients with purulent wounds of soft tissues of various etiologies, which were treated in the purulent surgical department of the clinical base of the Bukhara State Institute in 2017-2020, were analyzed.

All patients, depending on the method of treatment, were divided into 2 groups: Group I - patients with purulent surgical diseases of soft tissues against the background of diffuse toxic goiter. II - group of patients with purulent surgical diseases of soft tissues against the background of a combination of diffuse toxic goiter and diabetes mellitus.

On the day of admission, all patients with purulent diseases of soft tissues of groups I and II underwent an opening of the purulent focus. After sanitation of wounds with antiseptics - 3% solution of hydrogen peroxide, 0.02% solution of furacilin and necrectomy, using 25% solution of dimethyl sulfoxide for local treatment, a gauze bandage with levomekol ointment on a water-soluble basis was applied. Systemic antibiotic therapy was carried out taking into account the sensitivity of microflora secreted from wounds, detoxification therapy, as well as symptomatic treatment.

An objective assessment of the course of general and local manifestations of the process was carried out according to subjective indicators (the nature of the wound discharge, resorption of the infiltrate, the state of the wound edges, the peculiarities of the development of granulation tissue and epithelialization) and by objective signs (body temperature, general clinical blood analysis, leukocyte index of intoxication, concentration of middle molecular peptides in blood serum, pH of wound discharge, calculation of PC according to MF Mazurik, percentage of reduction in the area of the wound surface, rate of wound healing, bacteriological and cytological examination).Microbiological analysis was carried out by sampling the discharge from the wound with a qualitative and quantitative assessment of the wound infection, as well as its susceptibility to various antibiotics.

On admission, both groups of patients had wounds in phase I of the wound process. On the day of admission, all patients with purulent diseases of soft tissues underwent an opening of the purulent focus (Fig. 1).

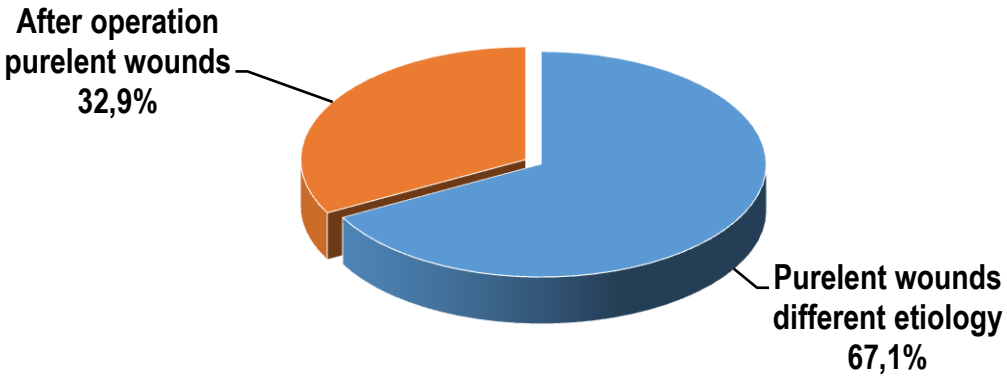

Figure: 1. Distribution of patients by etiological factors

On admission, the general condition of the examined patients of both groups, objective and subjective criteria and clinical and laboratory parameters were identical.

On the day of admission on an emergency basis, all patients of both groups underwent an operation: opening the purulent focus, and sanitizing the purulent cavity with an antiseptic 3% hydrogen peroxide solution, after drying, sanitizing with a chemical solution of 25% dimethyl sulfoxide was performed, followed by the application of levomekol ointment and aseptic gauze bandages impregnated with a 25% solution of dimethyl sulfoxide daily 1 time per day.

After fulfilling the basic principles of treatment of purulent wounds and systemic antibiotic therapy, taking into account the sensitivity of the microflora of wounds. Most of the operations were performed under local anesthesia.

RESULTS AND DISCUSSION

It should be noted, given that the first group of patients with purulent surgical diseases of soft tissues had a concomitant disease of diffuse toxic goiter, all patients, with the participation of an endocrinologist, underwent medical correction of the level of thyroid hormones.The analysis of the results of indicators of intoxication of the organism of patients with purulent diseases of soft tissues of the I subgroup of comparison revealed the following changes (Table 1).

Table 1.
Dynamics of indicators of intoxication in patients with purulent soft tissue diseases group I (n = 67)

Indicator	Observationtime

	dayofadmission	3 day	5 day	7 day	9-10 day
t^0body	39,2±0,36	38,2±0,15*	37,6±0,14*	37,0±0,18	36,6±0,11*
Lblood $\times 10^9$/l	9,6±0,32	8,2±0,27*	7,4±0,18	7,1±0,18	6,6±0,22
MSM units	0,196±0,011	0,151±0,008**	0,132±0,004	0,118±0,006**	0,106±0,005***
LII unit	2,2±0,06	1,5±0,07*	1,2±0,05	1,1±0,05	1,0±0,05***
SOEmm/H	44,1±1,35	36,2±1,32*	30,4±1,22*	21,4±1,08***	12,1±0,65***

Note: * - differences relative to the data of the previous day are significant (* - P <0.05, ** - P <0.01, *** - P <0.001)

As can be seen from the table, during treatment and observation by the tenth day, all analyzed indicators of intoxication, except for ESR of blood, were within normal limits.

The following criteria for assessing the dynamics of the wound process in patients were the pH of the wound environment, the percentage of reduction in the area of the wound surface and PC indicators according to M.F. Mazurik (Table 2).

Table 2.

Dynamics of biochemical parameters and rate of wound healing in patients of group I (n = 67)

Indicators	Observation time				
	1 day	3 day	5 day	7 day	9-10 day
pH of the wound environment	4,4±0,11	4,9±0,14	5,3±0,14***	6,4±0,17	7,1±0,18***
Percentage reduction in wound surface area	0	0,9±0,03***	1,4±0,05***	2,7±0,11***	3,1±0,16
Wound exudate protein (g / l)	59,6±1,36	52,3±1,42	39,2±1,21***	32,9±1,19	-
Total blood protein (g / l)	64,6±2,6	66,8±1,93	67,1±1,48	68,8±2,1	72,2±2,28
PC according to M.F. Mazurik	1,0±0,01	1,2±0,04**	1,7±0,05***	1,7±0,03*	-

Note: * - differences relative to the data of the previous day are significant (* - P <0.05, ** - P <0.01, *** - P <0.001)

In patients of the analyzed group, by the tenth day of treatment, the pH of the wound environment became neutral. The decrease in the area of the wound surface per day was 3.1 ± 0.16%. The release of exudate from the wound has ceased, which, in our opinion, is due to the transition of the wound process from the 1st to the 2nd phase.One of the characteristic criteria for assessing the wound process was to determine the level of microbial contamination, to identify the species composition of microflora and the timing of wound cleansing. The revealed species composition of microflora sown from the exudate of infected wounds of patients with purulent diseases of soft tissues of group I is shown in Figure 2.

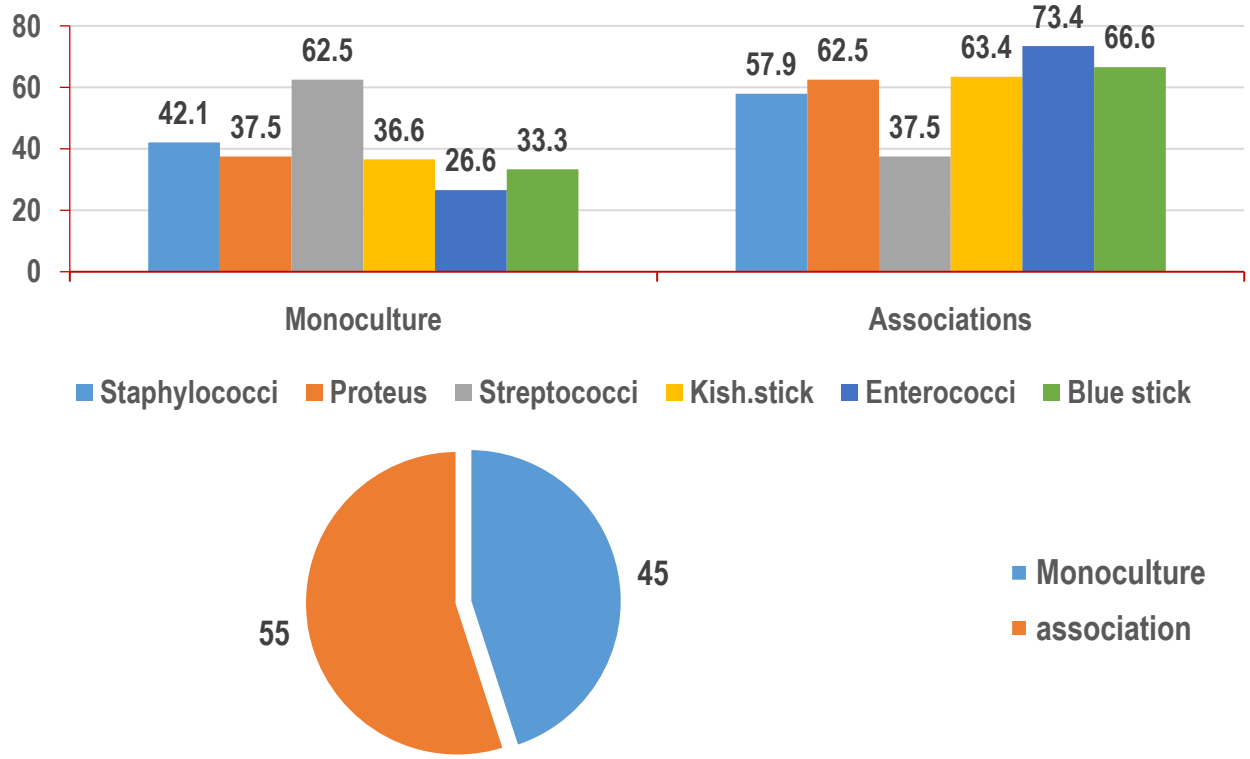

Figure: 2. Species composition of microflora, seeded from their exudate of infected wounds of patients with purulent diseases of soft webs of group I (n = 67)

The results of the analysis of the timing of cleansing and wound healing in patients of group I are shown in Figure 3.

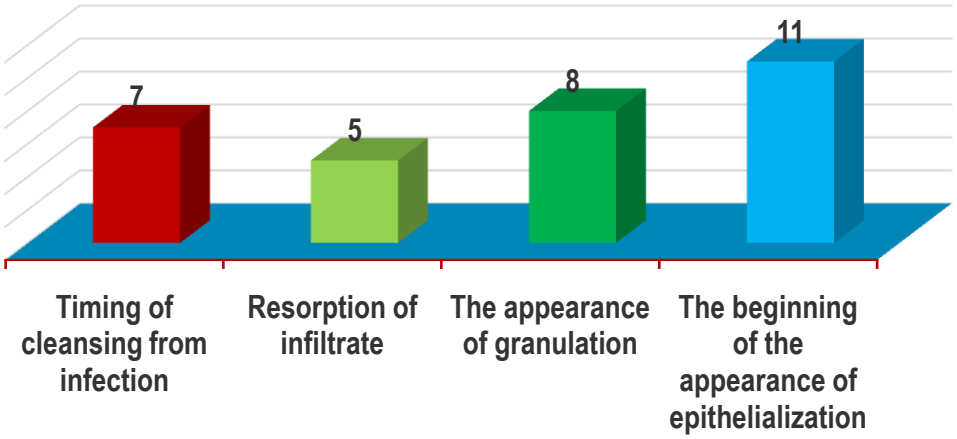

Figure: 3. Terms of wound cleansing and healing in patients of group I with purulent-necrotic diseases (n = 67)

The results of studying the indicators of mineral, carbohydrate metabolism and thyroid hormones in patients of the first group are shown in Tables 3 and 4. Table 3

Dynamics of indicators of mineral and carbohydrate metabolism in patients

Group I (n = 67)

Indicators	Observation time				
	Normal	Day of admission	3 day	5 day	7 day
Na^+blood	136-145 mmol/l	151±2,31	147±3,73	144±2,66	149±2,58
K^+blood	3,4-5,6 mmol/l	2,17±0,54	2,21±0,34	2,34±0,41	2,31±0,47

Ca^{+}blood	2,03-2,6 mmol/l	1,22±0,92	1,31±1,14	1,48±0,67	1,51±0,19
Bloodsugar	4,5-7,0 Mmol/l	8,9±0,9	7,4±1,03	7,1±1,12	7,2±1,54

Note: * - differences relative to the data of the previous day are significant (* - P <0.05, ** - P <0.01, *** - P <0.001)

Indicators of mineral and carbohydrate metabolism of the 1st group on the day of admission had their own characteristics. So, in patients of the first group, all these indicators on the day of admission did not significantly differ from the norm. It should be noted that all the deviations of mineral metabolism indices from the norm in patients of group I, noted in Table 3, were insignificantly lower than in patients with concomitant diseases of diabetes mellitus (group II). All this, in our opinion, is due to the peculiarities of the pathogenesis of the disease of diffuse toxic goiter, which naturally negatively affects the outcome of treatment.

Analysis of the results of thyroid hormone indicators in patients of group I with purulent diseases of soft tissues against the background of diffuse toxic goiter revealed a significant deviation from the norm Table 4. During treatment, these indicators tended to normalize at a significantly slow rate.

Table 4

Dynamics of indicators of thyroid hormones in patients Group I (n = 67)

Indicators	Observation time				
	normal	Day of admission	3 day	5 day	7 day
T3nmol/l	1,5-3,8	4,1±0,17	3,95±0,15	3,88±0,11	3,74±0,11
T4nmol/l	90-120	138±3,45	127±4,17	128±2,15	132±4,18
ТТГ mkME/l	0,10-4,0	0,085±0,012	0,09±0,009	0,088±0,008	0,09±0,097

Note: * - differences relative to the data of the previous day are significant (* - P <0.05, ** - P <0.01, *** - P <0.001)

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Group II included 21 patients with acute purulent surgical diseases against the background of diffuse toxic goiter with a combination of diabetes mellitus.

On the day of admission, all patients with purulent diseases of soft tissues had the same surgical treatment tactics as in the previous group. Given that this group of patients with purulent surgical diseases of soft tissues had concomitant diseases of diabetes mellitus and diffuse toxic goiter, all patients with the participation of an endocrinologist underwent drug correction of blood sugar levels.Most of the patients 77 (89.5%) were type II diabetes mellitus, 9 (10.5%) patients were type I diabetes mellitus.

On the day of admission, the initial blood sugar level in group II patients averaged 12.8□ 1.1 mmol / L. In the course of complex treatment with specific therapy of diabetes mellitus with the participation of an endocrinologist, the blood sugar level in dynamics decreased to 7.8 - 0.8 mmol / L by days 5-6. Insulin therapy was carried out taking into account the individual characteristics of each patient.

Analysis of the results of indicators of intoxication of the body of patients with purulent diseases of soft tissues of group II revealed the following changes (Table 5).

Table 5

Dynamics of indicators of intoxication in patients with purulent group II soft tissue diseases (n = 21)

Indicators	Observation time				
	Admission day	3 day	5 day	7 day	9-10 day
t^0body	38,9±0,41	38,7±0,21*	38,0±0,18*	37,7±0,16	36,9±0,12*
Lblood $\times 10^9$/l	9,6±0,22	8,9±0,28*	8,4±0,32	7,9±0,18	6,9±0,17
MCM unit	0,244±0,011	0,211±0,017**	0,192±0,005	0,178±0,015**	0,128±0,006***
LII unit	2,3±0,07	2,1±0,09*	1,9±0,07	1,7±0,04	1,4±0,06***
SOE mm/h	48,1±1,88	42,3±1,54*	39,5±1,22*	32,7±1,18***	24,1±0,56***

Note: * - differences relative to the data of the previous day are significant (* - P <0.05, ** - P <0.01, *** - P <0.001)

As can be seen from the table, during treatment and observation only by the tenth day, all analyzed indicators of intoxication, except for MSM and blood ESR, were within normal limits.

The next criteria for assessing the dynamics of the wound process in patients were the pH of the wound environment, the percentage of reduction in the area of the wound surface, and PC indicators according to MF Mazurik (Table 6).

Table 6.
Dynamics of biochemical parameters and rate of wound healing in patients of group II (n = 21)

Indicators	Observation day				
	1 day	3 day	5 day	7 day	9-10 day
pH of the wound environment	4,2±0,14	4,3±0,16	4,7±0,14***	5,7±0,21	6,7±0,28***
Percentage reduction in wound surface area	0	0	0,6±0,03***	1,1±0,08***	2,2±0,11***
Wound exudate protein (g / l)	57,9±1,33	54,3±1,38	45,2±1,16***	43,6±1,19	40,4±1,26
Total blood protein (g / l)	59,6±1,44	59,8±1,32	60,7±1,72	61,9±2,64	63,1±2,17
PC according to M.F. Mazurik	0,9±0,02	1,1±0,04**	1,3±0,03***	1,4±0,04*	1,5±0,04*

Note: * - differences relative to the data of the previous day are significant (* - P <0.05, ** - P <0.01, *** - P <0.001)

In patients of the analyzed group, only by the tenth day of treatment, the pH of the wound environment became neutral. The decrease in the area of the wound surface per day became equal to 2.2 ± 0.11%. The release of exudate from the wound has ceased, which, in our opinion, is due to the transition of the wound process from the 1st to the 2nd phase.One of the characteristic criteria for assessing the wound process was to determine the level of microbial contamination, to identify the species composition of microflora and the timing of wound cleansing. The identified species composition of microflora sown from the exudate of infected wounds of patients with purulent diseases of soft tissues of group II are shown in Fig. 4.

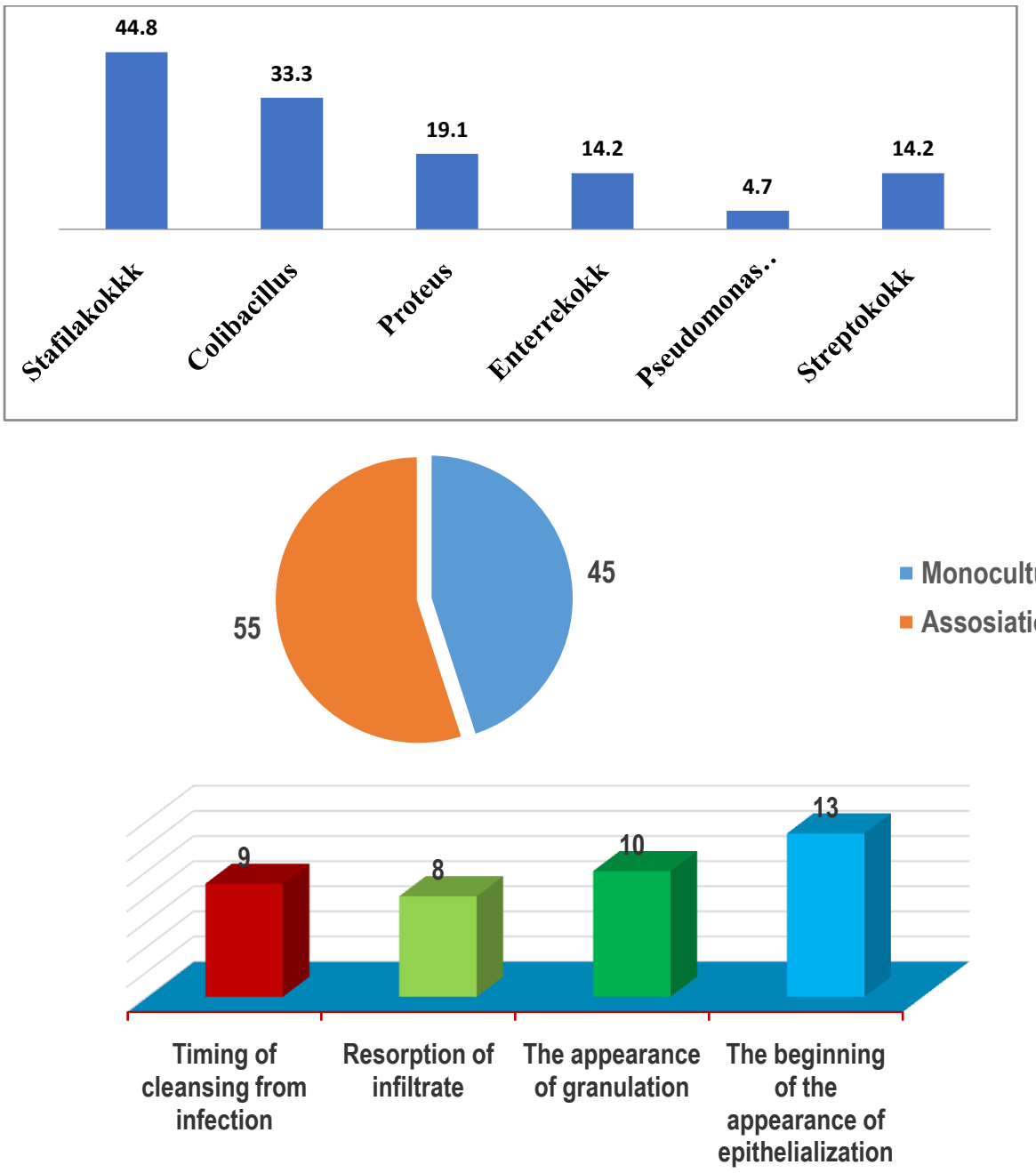

Figure: 5. Terms of wound cleansing and healing in patients of group II with purulent-necrotic diseases (n = 21)

The results of studying the indicators of mineral, carbohydrate metabolism and thyroid hormones in patients of the third group are shown in Tables 7 and 8.

Table 7.

Dynamics of indicators of mineral and carbohydrate metabolism in patients Group II (n = 21)

Indicators	Observation time				
	normal	Admission day	3 day	5 day	7 day
Na^+blood	136-145 mol/l	154±2,98	152±3,09	164±2,186	159±3,78
K^+blood	3,4-5,6 mol/l	1,98±1,14	2,11±0,29	2,04±0,24	2,08±0,35
Ca^+blood	2,03-2,6 mol/l	2,72±1,87	2,91±1,17	2,74±1,06	2,74±1,19

Sugarblood	4,5-7,0 mol/l	13,8±1,2	11,4±1,21	9,1±1,32	9,2±1,71

Note: * - differences relative to the data of the previous day are significant (* - P <0.05, ** - P <0.01, *** - P <0.001)

The indicators of mineral and carbohydrate metabolism in patients of group II had the following peculiarities: on the day of admission, the deviations from the norm of these indicators compared to group I did not differ significantly, but later normalized at a much slower rate, retreating by 2-3 days. In our opinion, this is due to the negative influence of the combined background disease of diabetes mellitus and diffuse toxic goiter.The initial blood sugar level in patients of group II was on average 13.8 ± 1.2. In the course of treatment of purulent surgical diseases of soft tissues with one-step drug correction of blood sugar levels, the indicators gradually returned to normal (Table 7).

The study of indicators of thyroid hormones in patients of group II with purulent diseases of soft tissues against the background of diabetes mellitus and diffuse toxic goiter revealed that the thyroid hormones of this group on the day of admission had significant deviations from the norm, as in group I.

Table 8.

Dynamics of indicators of thyroid hormones in patientsGroup II (n = 21)

Indicators	Observation time				
	Normal	Admission day	3 day	5 day	7 day
T3nmol/l	1,5-3,8	4,8±0,38	4,6±0,22	4,78±0,45	4,66±0,61
T4nmol/l	90-120	141±3,16	139±2,78	133±2,88	131±2,54
TTGmkME/l	0,10-4,0	0,044±0,024	0,068±0,019	0,086±0,11	0,087±0,013

Note: * - differences relative to the data of the previous day are significant (* - P <0.05, ** - P <0.01, *** - P <0.001)

Thus, our study of patients of group I with purulent-necrotic diseases of soft tissues against the background of a combined disease of diabetes mellitus and diffuse toxic goiter revealed the following features of the course of the wound process: all indicators of intoxication of the body, pH of the wound environment of the patient's wound on the day of admission were significantly deviated from norms.In the course of the traditional method of treatment, these indicators in dynamics tended to normalize at a slower pace than group I, retreating by 2 days. In this case, the average bed days were 10 1.4 days, when in group I patients these indicators were equal to 8 1.5 days.

CONCLUSION

Thus, our study of patients of group II with purulent-necrotic wounds of soft tissues against the background of a combined disease of diabetes mellitus and diffuse toxic goiter revealed the following features of the course of the wound process: all indicators of intoxication of the body, pH of the wound environment of patients on the day of admission were significantly deviated from the norm. than patients of group I. In the course of the traditional method of treatment, these indicators in dynamics tended to normalize at a slower pace than in group

I, retreating by 2 days. At the same time, the average bed days were 10 1.4 days, when in group I patients these indicators were equal to 8 1.5 days.

LITERATURE

1. AkanovZh.A., SeydinovaA.Sh., ZhunusbekovaN.Zh. and others. The incidence of complications in patients with diabetes mellitus according to the diabetes center // Bulletin of KazNMU. 2015. No. 4. –S.289-292
2. Akhmedov R.M., Safoev BB, Khamdamov B.Z., Khomidov F.K. An improved method of amputation for diabetic foot syndrome with critical ischemia of the lower extremities // "Current Problems of Purulent Surgery",Republic of Proceedings of the scientific-practical conference Bukhara-Afshona 2010 yil 5-6 November, - pp. 123-125.
3. BoltaevT.Sh., Safoev B.B. Local treatment of purulent-surgical diseases of soft tissues with a chemical drug dimethyl sulfoxide and its combination with a physical method of treatment // Problems of Biology and Medicine. - 2020, No. 1 (116) - S. 27-31.
4. Okhunov A.O., Babadjanov B.D., Pulatov U.I. The reasons for the generalization of infection in patients with purulent-inflammatory diseases of soft tissues against the background of diabetes mellitus // Bulletin of the Tashkent Medical Academy. No. 4, 2016. Pp. 89-93.
5. Stolyarov S. I., Grigoriev V. L. Experience in the treatment of pyoinflammatory diseases of the thyroid gland // Health. Medical ecology.
6. Boltaev T.SH., Safoev B.B., Borisov I.B., YarikulovSh.Sh., Khasanov A.A., RahmatovSh.Sh., Rajabov V.B. Effectiveness of the application of the phys-ical method on a wound by plasma flow of argon in the complex treatment of patients with purious diseases of soft tissues // Asian Journal of Multidimensional Research. - 2019, No. 8 (12), p.161-167.
7. A. Ya. Rakhimov, B.B.Safoev, O.M. Kurbonov, O. Makhmanazarov. An improved method of surgical treatment for critical ischemia of the lower extremities in patients with diabetes mellitus // The role and place of innovative technologies in modern surgery (Nash va mavei tekhnologiyaҳoi innovatsiony dar tibbi muosir). November 23, Dushanbe, Tajikistan. Volume-1, pp. 197-199
8. Vlasov A.P., Zaytsev P.P., Vlasov P.A. Increasing the reparative potential of tissues in diabetes mellitus // Surgery. - 2017.-№12.-P.52-57.
9. A.Y .Rakhimov, B.B.Safoev, O.M. Kurbonov, O. Makhmanazarov. An improved method of surgical treatment for critical ischemia of the lower extremities in patients with diabetes mellitus // The role and place of innovative technologies in modern surgery (Nash vama veitekhnolo giyaҳoiinnovatsionydartibbimuosir). November 23, Dushanbe, Tajikistan. Volume-1, pp. 197-199
10. Kurbanov O.M Features of the clinical course of liver abscesses against the background of diabetes mellitus // Problems of Biology and Medicine. Uzbekistan, Samarkand. 2020, no. 1 (116). P. 64-66.
11. Kurbanov O. M Features of the course of purulent surgical diseases in diabetes // new day in medicine. Uzbekistan, Tashkent 2020 April-July No. 2 (30). Pages 167-170.2.
12. Okhunov A.O., Babadzhanov B.D., Pulatov U.I. Reasons for the generalization of infection in patients with purulent-inflammatory diseases of soft tissues against the background of diabetes mellitus // Bulletin of the Tashkent Medical Academy. No. 4, 2016. Pp. 89-93.
13. RakhimovA.Ya., Qurbonov O.M., Sagdullayeva G.U., Safoyev B.B., Latipov O. Z. Transcutaneous oximetry as the choice of the research for determination of level of amputation of the crus at critical

ishemiya of the lower extremities at patients with the diabetes mellitus//Asian Journal of Multidimensional Research.Vol 8, Issue 12, December 2019.Impact Factor: SJIF 2018 = 6.053

14. Safoev BB, Kurbonov OM, Sharopova MS. Features of the course of purulent surgical diseases in endemic goiter // new day in medicine. Uzbekistan, Tashkent 2020 April-July No. 2 (30). Pp. 532-535.
15. Kurbonov OM, Sharopova M.S. Influence of thyroid hormones on the course of purulent surgical diseases in thyrotoxicosis // a new day in medicine. Uzbekistan, Tashkent 2020 April-July No. 2 (30). Pages 430-434.
16. Sharopova M.S., Kurbonov O.M., Sharopova M.M., Mukhammadiev Sh.Sh. Disorders of protein metabolism in patients with purulent wounds on the background of thyrotoxicosis // new day in medicine. Uzbekistan, Tashkent 2020 April-July No. 2 (30). Pages 608-610.
17. KurbanovO.M. Features of the clinical course of purulent thoracic surgical diseases against diabetes mellitus// Academiciaan international multidisciplinary research journal. India, Kurukshetra. June Vol.10, Issue 6, 2020y, P. 82-90.Impact Factor: SJIF 2020 = 7.13
18. Kurbanov O. M. Features of the clinical course of abscesses liver on the background of diabetes//World Journal of Pharmaceutical Research. Volume 9, Issue 5, 1540-1546. March 2020.
19. Abdullayeva, N. I., Sulaymonova, D. H., &Fattoyeva, Z. R. (2019). Methods of teaching in foreign and nonspecific directions. European Journal of Business & Social Sciences, (7), 610-611.
20. Fattayeva, Z. R. (2019). MUSIC AND PRONUNCIATION. International scientific review, (LXIV).
21. Сулаймонова, Д. А. (2019). Основаныеаспкты формирования лексических навыков студентов технических ВУЗОВ. International scientific review, (LXIV).
22. Сулаймонова, Д. А. (2019). Структура и содержание лексической компетенции при обучении русскому языку студентов технических ВУЗОВ. In EUROPEAN RESEARCH: INNOVATION IN SCIENCE, EDUCATION AND TECHNOLOGY (pp. 71-74).
23. NabiyaIdrisovna, A., Maqsudovna, A. M., Abduraxmonova, S. D., &Raxmatovna, F. Z. (2020). Abilities to Express Lexical Units in Translation. *International Journal of Psychosocial Rehabilitation*, *24*(1).
24. Sulaymonova, D. H. (2019). USING MUSIC AND SONG IN TEACHING FOREIGN LANGUAGES. *Internationalscientificreview*, (LXIV)
25. Abdullayeva, N. I. (2019). METHOD OF TEACHING ENGLISH IN TECHNICAL INSTITUTES. *Internationalscientificreview*, (LXIV).
26. RakhimovA.Ya., Qurbonov O.M.,Sagdullayeva G.U., Safoyev B.B.,Latipov O. Z. Transcutaneous oximetry as the choice of the research for determination of level of amputation of the crus at critical ishemiya of the lower extremities at patients with the diabetes mellitus//Asian Journal of Multidimensional Research.Vol 8, Issue 12, December 2019.ImpactFactor: SJIF 2018 = 6.053
27. Kurbanov OM Features of the clinical course of liver abscesses against the background of diabetes mellitus // Problems of Biology and Medicine. Uzbekistan, Samarkand. 2020, no. 1 (116). P. 64-66.
28. Davlatova M.H. (2020) An Integrative History of Aspectual Meanings Journal NX- A Multidiciploinary Peer Reviewed Journal Volume 6,Issue 4,Apr.-2020
29. . MukhayyoHasanovnaDavlatova. Lexico Semantic Structure and its Analysis on the Example of Verbs Journal NX- A Multidisciplinary Peer Reviewed Journal Volume 6, Issue 6, June. (2020) 189-192