



THE EFFECTIVENESS OF AN ELECTRO ACTIVATED WATER SOLUTION IN THE TREATMENT OF PURULENT DISEASES OF SOFT TISSUES ON AN OUTPATIENT BASIS.

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Article history:	Abstract:
<p>Received: October 6th 2022 Accepted: November 6th 2022 Published: December 14th 2022</p>	<p>The results of a study of 130 patients with purulent soft tissue diseases on an outpatient basis were studied. Depending on the method of treatment, all observed patients were divided into two groups: I the group included 62 patients with purulent diseases of soft tissues who, as a local treatment, used wound sanitation with a 25% solution of dimethyl sulfoxide with the imposition of levomekol ointment under a gauze bandage. The main group II patients received surgical treatment of a purulent focus, sanitation and application of the wound with an electroactivated solution, Electro-activated solution Anolyte and Electro-activated solution Catholyte.</p> <p>The research results showed that physicochemical methods of treating patients with the use of a 25% solution of dimethyl sulfoxide and Electro-activated solution Anolyte and Electro-activated solution Catholyte is an effective, simple and convenient way to treat purulent soft tissue diseases on an outpatient basis.</p>

Keywords: Purulent wound, Electroactivated aqueous solution, dimethyl sulfoxide

RELEVANCE. Purulent diseases of soft tissues are one of the important problems of surgery in ambulatory conditions. According to the data of various sources of the last years, purulent diseases of soft tissues treated in an outpatient setting make up to 46% of surgical patients treated in an outpatient setting. [4; 1993; 79-84 p. 6; 2009; 89 pp.]

It is known that the problem of resistance of microorganisms makes it difficult to fight with surgical infection. The use of physico-chemical method in the treatment of purulent diseases of soft tissues is considered one of the most effective methods, in which the problem of resistance of microorganisms does not arise. [8; 2020; 9-10 s]. We have experience using 25% dimethylsulfoxide chemical preparation in complex treatment of purulent diseases of soft tissues and we have achieved positive results. [8; 2020; 45-47 p] In their work, other authors show the advantage of using electroactivated aqueous solutions in the treatment of purulent diseases of soft tissues of various etiologies. (1; 1979.,2; 1979.,3; 1979., 5; M, 2005. - T.4, #1. -S.54-56.; 7; PM. 2013. #2 (67).

We used electroactivated aqueous solutions prepared on the "Espero-1" device in the treatment of soft tissue purulent diseases of various etiologies. "Espero-1" device was invented at Espero IAF in 1998 by Professor S.A. Alyokhin at Central Asian Gas Institute. Bioelectroactivator Espero is approved for use in medical practice by the Farm Committee of the UzR and is widely used in the V.V. Vokhidov Surgery Institute Ruz dlya polucheniya preparatov,

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The purpose of the study was to determine the effectiveness of using 25% dimethylsulfoxide and electroactivated aqueous solutions in the outpatient treatment of soft tissue purulent diseases of various etiologies.

MATERIAL AND METHODS

In the study, the results of the treatment of 130 patients treated for soft tissue purulent diseases in the ambulatory conditions at the No. 6 Family Polyclinic of the Bukhara City Medical Association in 2018-2021 are presented. All patients were divided into two groups depending on the treatment method: group I included 62 patients who received antibiotic therapy and symptomatic treatment as general treatment, 25% dimethylsulfoxide solution and levomekol ointment under bandage as local treatment. Bandages were changed once a day. Group II included 68 patients who received antibiotic therapy and symptomatic treatment as general treatment, electroactivated aqueous solutions as local treatment, and levomekol ointment under bandage. Bandages were changed 1 time per day.

The effectiveness of the methods used during the study was evaluated by the dynamics of the level of clinical and laboratory indicators of endogenous intoxication (increase in body temperature, leukocytes in the blood, EChT, ILI), the period of healing and healing of the wound. Taking



into account the mechanism and characteristics of electroactivated aqueous solution (EASE) on the purulent wound, "anolyte" was used in the first phase of the purulent wound healing process, and "catholyte" in the second phase.

Results and discussion

The control group consisted of 62 patients. 42 of them (67.7%) were patients with purulent soft tissues of various etiologies, including phlegmon, pararitisa, purulent hematoma, abscess, hydroadenitis, purulent epithelial-lumen cysts, 20 (32.3%) were patients with postoperative purulent wounds.

All patients with purulent soft tissues who referred to the polyclinic surgeon were treated with antibiotic therapy and surgical treatment of the purulent foci on the day of referral. Taking into account the importance of preparing the patient in the preoperative period for the result of operative treatment, premedication with 1 ml of 1% dimedrol and 2 ml of 50% analgin solutions was carried out 20 minutes before the operation. At the end of the premedication time, the purulent foci were surgically treated under Vishnevsky local infiltration anesthesia with 40-60 ml of 0.5% - 1% novocaine solution. Surgical treatment included the following: excision of the purulent focus, removal of dead tissue from the border of healthy tissue, and treatment of the wound with antiseptics and tamponade.

Group I patients were treated with 25% dimethylsulfoxide solution, and Levomekol ointment was placed under a gauze bandage.

In the complex treatment of patients of the main group II, as mentioned above, antibiotic therapy as a general treatment, electroactivated aqueous solution (EASE) as a local treatment, taking into account the antibacterial effect of EASE-A - "anolyte" in the first phase of the healing phase of the wound, and taking into account the feature of strengthening the reparative process in the second phase - EASE- K - "catholyte" was used.

On the third day of treatment of the wound with EASE-A and complex treatment, the data of the body temperature index decreased from 38.3 ± 0.1 to 37.5 ± 0.09 °C. Blood leukocytes decreased to $8.2 \pm 0.27 \times 10^9/l$. ILI and ECH are accordingly 1.6 ± 0.06 . and decreased to 30.7 ± 1.91 . On the 6-7th day of treatment, the above-mentioned indicators of intoxication approached the standard indicators, and on the 10th day, they had a standard indicator.

The dynamic control of the level of microbial contamination of the purulent wound revealed the following: the level of microbial contamination of the

purulent wound on the day of application was relatively the same as the level of microbial contamination of the purulent wounds of the patients of the first group, and it was 108 mt/g. On the 3rd day of the complex treatment, it decreased to 4 orders, and on the 6th-7th day of the treatment, it was below the critical level in both groups of patients and was 103 mt/g - 102 mt/g. The dynamic control of the level of microbial contamination of the purulent wound revealed the following: the level of microbial contamination of the purulent wound on the day of application was relatively the same as the level of microbial contamination of the purulent wounds of the patients of the first group, and it was 108 mt/g. On the 3rd day of the complex treatment, it decreased to 4 orders, and on the 6th-7th day of the treatment, it was below the critical level in both groups of patients and was 103 mt/g - 102 mt/g.

Microbial clearance and wound healing in group I and II patients with purulent soft tissue diseases. (In days).

№	Кўрсаткичлар	I гуруҳ	II гуруҳ
1	Инфекциядан тозаланиш муддати	$7,2 \pm 0,6$	$7,0 \pm 0,4$
2	Инфилтратнинг сўрилиши	$6,5 \pm 0,4$	$6,0 \pm 0,5$
3	Грануляциянинг пайдо бўлиши	$8,0 \pm 0,5$	$7,1 \pm 0,4$
4	Эпителизациянинг бошланиши	$11,0 \pm 1,5$	$9,8 \pm 0,7$

Thus, the use of 25% dimethylsulfoxide and EASE-A and EASE-K in the treatment of purulent diseases of soft tissues in an outpatient setting showed that the physicochemical method is the most effective, simple and convenient method.

CONCLUSIONS

1. The use of electroactivated aqueous solution (EASE) is the most effective, simple and convenient physico-chemical method in the treatment of purulent diseases of soft tissues in an outpatient setting.

2. EASE-A anolyte for the first stage of purulent wound healing accelerates wound healing, and EASE-B catholyte is effective for the second stage.

3. The duration of wound healing and healing is accelerated when using an electroactivated aqueous solution, compared to when using 25% dimethylsulfoxide.



4. Electroactivated aqueous solution (EASE) anolytes and catholytes can be used in outpatient treatment of purulent diseases of soft tissues.

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