

## EXPERIENCE IN THE USE OF ELECTROPHORESIS FOR THE TREATMENT OF POST-INJECTION ASEPTIC ABSCESES OF MUSCLE TISSUE AFTER PROLONGED USE OF INJECTABLE ANTIBIOTICS DURING THE TREATMENT OF BROAD DRUG-RESISTANT TUBERCULOSIS OF THE LUNGS AND EXTRAPULMONARY ORGANS

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### ANNOTATION

Most patients are forced to receive injectable drugs during their lifetime, especially intramuscularly. So in phthisiology, when treating multi-resistant forms of tuberculosis, injectable antibiotics are used in treatment regimens, as one of the main drugs. But the duration of use of the drug leads to the development of both systemic side effects and local side effects at the injection site. In this article, we would like to share our experience in eliminating a post-injection aseptic abscess with the help of electrophoresis.

**Keywords**-post-injection aseptic abscess, electrophoresis, soreness, multi-resistant tuberculosis.

### INTRODUCTION

Material and method of research. In the study, we included 40 patients who are being treated in a hospital and treated according to standard combined regimens, in which there is an injectable drug for the treatment of broad-drug pulmonary tuberculosis.

In phthisiology, aminoglycosides, i.e. kanamycin, amikacin, and capreomycin, were used to treat multidrug-resistant and extensively drug-resistant tuberculosis until 2021. These types of antibiotics required exclusively intramuscular use, since intravenous use led to side effects such as neuropathy of the auditory nerve, leading to deafness, convulsions, nephropathy, hypokalemia, as well as in some described cases to cardiac arrest. As a result, drugs of this group of antibiotics required only intramuscular use. But even intramuscular use required better since multi-resistant and extensively drug-resistant tuberculosis required long-term use of antibiotics in combined cases, these drugs were administered intramuscularly for up to 6 – 8 months daily, in some cases according to the dynamics of the disease and side effects 3 times a week. Due to the constant administration, post-injection aseptic abscesses were gradually formed at the injection site in some patients. Which caused discomfort in patients. As a result, several types of physiotherapy procedures were applied in our clinic, the most effective of which was electrophoresis.

To apply this method, we divided the patients into four groups. Each group consisted of 10 patients consisted of:

The first group for the treatment of post-injection aseptic abscesses involved patients with the use of ointments with absorbable and anti-inflammatory properties (diclofenac ointment, lotion gel, aloe extract).

The second group for the treatment of post-injection aseptic abscesses involved patients with electrophoresis on the gluteal muscles using anti-inflammatory drugs (diclofenac solution 2.5% - 3.0 ml and Analgin solution 50% - 2 ml).

The third group for the treatment of post-injection aseptic abscesses involved patients with electrophoresis on the gluteal muscles using an antispasmodic (euffilin 2.4% - 5.0 ml) and a local anesthetic (novocaine 0.5% - 5 ml).

The fourth group for the treatment of post-injection aseptic abscesses involved patients with electrophoresis on the gluteal muscles using a ready-made solution of magnesium sulfate at a concentration of 33%.

Also in each group, we divided the patients into subgroups:

- Patients who have already completed the use of courses of injectable antibiotics (i.e. from 6 to 8 months)
- Patients who are injected with antibiotics (aminoglycosides) for 2-3 months
- Patients who have just started using injectable antibiotics (aminoglycosides).

As a result, we observed a more positive effect in the third group, in which, after use for 3-4 course days, there was a reduction in pain, elimination of discomfort in the gluteal muscles, softening of muscles in this area, and patients did not complain about further use of injectable antibiotics during the course.

In the second group, partial resorption of the infiltrate formed and a decrease in pain in the buttocks was observed, but complaints of soreness also remained during the injection.

In the first and fourth groups, the dynamics of resorption were observed very slowly. During the 1st course, i.e. 10 days, resorption with these drugs was not effective.

## RESULT AND DISCUSSION

Our experience has shown that the use of electrophoresis for the treatment of post-injection aseptic abscesses of muscle tissue using medicinal solutions of 2.4% - 5.0 ml diluted in 0.5% - 5 ml of novocaine and injected within 10 days into the gluteal muscles, improved microcirculation in the area of formations, reduced swelling, g and soreness at the injection site. Thus, patients could continue treatment with capreomycin, kanamycin, n, and amikacin for a whole course (from 6 to 8 months).

But this experiment was not effective in patients who received injectable antibiotics repeatedly, since the ECHO pattern revealed increased echogenicity of the oval-shaped structure, with no or partial blood filling, which meant the tissue in this area was replaced by connective tissue. And in patients receiving these drugs for the first time after using this method, blood circulation improved, infiltrates at the injection site decreased.

Patients who did not get results from this method had to inject injections into the femoral muscle and apply electrophoresis in this area.

### CONCLUSIONS

- - In most patients, after successfully receiving electrophoresis with euphyllin, well-being improved, discomfort decreased after receiving injections, and refusal to use the drug decreased.
- This physiotherapy technique can be used for the rehabilitation of muscle tissue in patients who have to receive intramuscular injections for a long time with various inflammatory and systemic diseases.
- - Also, this experience shows that it is possible in the initial stages of the development of post-injection aseptic abscesses of muscle tissue without surgical interventions.
- The negative sides of this experience are the impossibility of using it for purulent abscesses or abscesses of unclear etiology, which require careful collection of anamnesis.

### LITERATURE

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