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USE OF COBRA VENOM IN THE TREATMENT COMPLEX OF MYOFACIAL SYNDROME

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Abstract. Myofascial pain syndrome (MPS) is a common disorder characterized by chronic muscle pain caused by the presence of trigger points. These painful areas lead to limited mobility and deterioration of the patient's quality of life. In recent decades, there has been growing interest in alternative treatments, including the use of snake venom. Cobra venom, which has neurotoxic and anti-inflammatory properties, is gaining attention as a possible therapeutic agent in the treatment of myofascial pain syndrome. This article provides an overview of the mechanism of action of cobra venom, its potential therapeutic effects, and the results of clinical studies aimed at assessing its efficacy and safety.

Key words: myofascial pain syndrome, trigger points, traditional medicine, cobra venom, neurotoxin, pain relief

Myofascial pain syndrome is one of the most common causes of chronic pain associated with musculoskeletal disorders. [1,2,3]. Symptoms of MPS include localized pain that occurs as a result of muscle spasms, circulatory problems, and the appearance of trigger points—painful lumps in the muscles. Traditional treatments include physical therapy, massage, and medication. [4,5].

However, in recent years there has been a growing interest in alternative approaches, including the use of snake venoms, particularly cobra venom, for pain management. [6,7]. The use of cobra venom is based on its neuroparalytic action and ability to reduce inflammation and spasms, which can significantly improve the effectiveness of the treatment of myofascial syndrome. [7,8].

Cobra venom is a complex mixture of proteins, peptides, lipids and other active molecules such as neurotoxins, phospholipases, enzymes and proteases. One of the key

components of the venom is α-neurotoxin, which blocks the transmission of nerve impulses between neurons and muscle fibers, which can lead to muscle relaxation and reduced spasms. [10-12].

The mechanism of action of cobra venom on myofascial trigger points is based on its ability to influence nerve endings, which promotes neurogenic changes, restoring the normal balance in the functioning of muscle fibers. This, in turn, can lead to reduced pain, stress relief and improved mobility. [8,9].

One of the main causes of pain in myofascial syndrome is the activation of trigger points, which cause prolonged muscle spasms and chronic pain. [1,4,6]. The introduction of cobra venom into the area of these points helps to block pain impulses, reduce spasms and improve blood circulation in the affected tissues [9].

The main uses of cobra venom in MPS include:

1. Pain relief: α-neurotoxins, which are part of the cobra venom, block the transmission of nerve impulses, which reduces the perception of pain in the muscles. This may be useful in treating chronic pain associated with myofascial trigger points.
2. Muscle relaxation: the neuroparalytic effect of the poison helps relieve muscle spasms, which are often the cause of pain in MPS.
3. Anti-inflammatory effect: components of cobra venom, such as phospholipases, have an anti-inflammatory effect, which helps reduce inflammation in the area of trigger points and speed up tissue repair.
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Despite the extensive data on the therapeutic properties of snake venoms, specific clinical studies on the use of cobra venom for myofascial pain syndrome remain limited. However, some preliminary studies and patient reports show positive results. [14,16].

One clinical study conducted in 2015 used cobra venom extract for injection into trigger points in patients with chronic pain associated with myofascial syndrome. The results showed a significant reduction in pain and improvement in muscle function after several procedures. It was noted that in some cases the pain was reduced by 50-70% within 2-3 weeks after the start of treatment. [17].

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In addition, a number of studies have confirmed the ability of cobra venom to reduce inflammation and improve blood circulation at injection sites, which helps speed up the healing process [15,17].

Despite the promise of cobra venom, there are certain risks associated with its use. Snake venom is a toxic substance and its uncontrolled use can lead to serious side effects such as allergic reactions, swelling, headaches or abnormal heart rhythms. Therefore, all procedures must be carried out exclusively by qualified specialists, and the dosage and frequency of poison administration must be strictly controlled. [18,19].

Contraindications to the use of cobra venom are allergies to the components of the venom, inflammatory diseases in the acute phase, cardiovascular disorders, as well as pregnancy and lactation. [8,10,18].

Conclusion. The use of cobra venom in the treatment of myofascial pain syndrome is a promising and promising method that demonstrates good results in reducing pain, relieving muscle spasms and improving functional muscle activity. Despite the positive effects, further research is needed to better understand the mechanisms of action of cobra venom and its long-term effects when used in the treatment of MPS. It is also important to consider potential risks and side effects that require strict monitoring by doctors.

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