FRONTLINE MEDICAL SCIENCES AND PHARMACEUTICAL JOURNAL
(ISSN – 2752-6712)
VOLUME 02 ISSUE 03 Pages: 88-94
SJIF IMPACT FACTOR (2021: 5.14) (2022: 5.605)
OCLC – 1272874727 METADATA IF – 6.986
Publisher: Frontline Journals

Journal Website: https://frontlinejournals.org/journals/index.php/fmspj

Research Article

DRUG TREATMENT WITH NON-STEROIDAL ANTI-INFLAMMATORY DRUGS JAW ALVEOLITIS

Submission Date: February 26, 2022, **Accepted Date:** March 16, 2022,
Published Date: March 28, 2022
Crossref doi: https://doi.org/10.37547/medical-fmspj-02-03-09

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ABSTRACT

Non-steroidal anti-inflammatory drugs are widely used to suppress inflammation in the body. NSAIDs are available in different forms: tablets, capsules, ointments. They have three main properties: antipyretic, anti-inflammatory and analgesic. The best non-steroidal anti-inflammatory drug can only be chosen by a doctor, based on the individual characteristics of the patient. Self-treatment in this case may be fraught with serious adverse reactions or overdose. We suggest reading the list of drugs. The rating is based on value for money, patient feedback and expert opinion.

KEYWORDS

Alveolitis, odontogenic inflammatory diseases, anti-inflammatory drugs.

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INTRODUCTION

It is not uncommon for non-steroidal anti-inflammatory drugs to cause stomatitis, gingivitis, glossitis, cheilitis, ulceration of the oral mucosa and the gastrointestinal tract. It should also be noted that the traditionally used treatment of inflammatory processes in the maxillofacial region does not always give the desired results. Recently, complex antihomotoxic drugs that affect the intercellular matrix, body defence mechanisms, the immune system and promote reparative processes have been attracting particular attention. The advantages of antihomotoxic treatments include the use of natural raw materials for the production of drugs, minimal doses and as a consequence, no toxic effects on the body, getting used to antihomotoxic drugs and their high effectiveness when properly prescribed. These preparations are also prescribed in dental practice.

However, despite all the advantages of antihomotoxic therapy, it is not widely used in the treatment of inflammatory diseases of the maxillofacial region, including in the treatment of inflammation of the periosteum of the jaw and the surrounding tissues. Carefully thought-out sequential, combined treatment of periostitis of the jaw with the use of antihomotoxic drugs of different spectrums of action can create conditions for a speedy recovery of the patient and prevent complications. Thus, there is a need to formulate the concept of rational complex treatment of odontogenic periostitis of the jaws, within which surgical treatment and new schemes of antihomotoxic drugs with different properties and specific effects on the general status of the organism, bone and soft tissues of the jaws will be proposed.

OBJECTIVE

To improve the effectiveness of the treatment of maxillary alveolitis with the use of non-steroidal anti-inflammatory drugs.

MATERIALS AND METHODS

We studied 27 people with maxillary alveolitis between 2021 and 2022, as well as 17 healthy volunteers without serious underlying somatic pathology and with a cleaned mouth. Patients with odontogenic inflammatory diseases were

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divided into 3 groups, randomized by age and sex; their examination was carried out by the same methods, but the complex of drugs prescribed

Criteria of selection of patients with odontogenic inflammatory diseases in this or that investigated group were the following: intensity of the pain sense in the first hours after surgical intervention, character of the accompanying somatic pathology. The criterion for selection of patients in group 1 was "low intensity" pain. The criterion for selection of patients to Group 2 was a feeling of pain of "moderate to high intensity": 4 to 10 points. Group 3 included patients with varying levels of pain. Group 1 were patients whose medical treatment included a mono-course of nonsteroidal anti-inflammatory drug (nimesulide). Group 1 consisted of 10 patients (5 men and 5 women) aged 18 to 60 years.

Group 2 - patients whose medical treatment included a consecutive course of non-steroidal anti-inflammatory drugs (ketorolacatromethamine, nimesulide). Group 2 consisted of 8 patients (4 male and 4 female) aged from 19 to 74 years (mean age 30,1 ± 0,76 years).

Group 3 were patients whose medical treatment excluded the use of non-steroidal anti-inflammatory drugs. Group 3 consisted of 9 patients (4 men and 5 women) aged 17-70 years.

Group 4 consisted of 18 healthy volunteers aged 20 to 27 years (mean age 23.2 ± 0.53).

The examination of the patients included basic and additional methods of investigation. Basic methods of investigation were performed on the patients at the initial and each follow-up visit, and included a thorough history, external and intraoral examination.

The degree of inflammatory contracture of the masticatory muscles was determined according to the presence and character of mouth opening restriction. For subsequent analysis of the data obtained, each degree of inflammatory contracture was assigned a score equivalent to the degree value.

"1" - mouth opening up to 3 cm - minor degree of inflammatory contracture - 1 point

"2" - mouth opening up to 2 cm - moderate degree of inflammatory contracture - 2 points

"3" - mouth opening up to 0.5 cm - pronounced degree of inflammatory contracture - 3 points. The examination of the patients included basic and additional methods of investigation. Basic

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"2" - mouth opening up to 2 cm - moderate degree of inflammatory contracture - 2 points

"3" - mouth opening up to 0.5 cm - pronounced degree of inflammatory contracture - 3 points. During the intraoral examination, attention was paid to the condition of the mucosa: changes in colour, humidity of the mucosa, the presence of edema, ulcers or wounds, infiltrates, exudate. The level of hygiene, the nature of the relationship of the dentition, the condition of the teeth, periodontal tissues were assessed.

Additional methods of examination included radiological (X-ray and ultrasound) and laboratory tests.

Radiological methods of investigation were carried out on the day of initial treatment of patients in order to specify the diagnosis and differential diagnosis, and included intraoral radiography or orthopantomography.

Laboratory tests of the mixed saliva, were used to assess the indicators of the local immune protection factors of the oral cavity, both in the norm and as criteria for the effectiveness of the treatment carried out. Local immune protection factors were studied on the day of treatment and on the 7th day after the start of treatment.

In patients with odontogenic inflammatory diseases the pain sense was carefully evaluated both at the moment of primary examination before treatment and at the stages of the conducted therapy. To assess the dynamics of pain, we used a scale developed by Professor S. T. T. Sokhov.

1 point - the postoperative course is completely painless: within 2 hours, 4 hours, 6 hours, 12 hours, the first day, second day, third day, fourth day, fifth day after the dental intervention;

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1 point - the postoperative course is slightly painful for - 2 hours, 4 hours, 6 hours, 12 hours, the first day, the second day, the third day, the fourth day, the fifth day after the dental intervention, which does not require additional medication and pain relief

2 points - the postoperative course is accompanied by significant pain for - 2 hours, 4 hours, 6 hours, 12 hours, the first day, the second day, the third day, the fourth day, the fifth day after the dental intervention, which requires additional medical treatment and pain relief.

The examination of healthy volunteers was similar to that of patients with odontogenic inflammatory diseases and included collection of anamnesis, external and intraoral examination, and laboratory tests.

RESULTS OF THE STUDY

In our studies we found that the most significant and reliable reduction of clinical signs of inflammation in the course of treatment was registered when using mono-course of NSAIDs ($P<0.05$), indicating its pronounced anti-inflammatory effect. However, the most striking analgesic effect was registered when a successive course of NSAIDs (naproxen and aceclofenac) was administered while using naproxen ($P<0.02$) .

In our work, we found that the intensity of the feeling of pain differed according to the nosology and period of the disease. For example, at the time of presentation, pain was at its most intense in patients diagnosed with alveolitis.

In an analysis of the sense of pain, we found that a reduction in pain intensity at the end of the treatment was registered in each group of patients examined. On the 5th day of follow-up the intensity of pain reached approximately the same values in all the groups studied, as indicated by the absence of significant differences at this time ($P>0.05$). However, the course and nature of pain manifestations in different pharmacological courses had significant differences, especially in the first postoperative hours, up to the first day of observation.

So, by the 4th observation hour in the group №1 the intensity of pain sense had not reliably decreased by 6,85 % ($P>0,05$), in the group №2 reliably decreased by 27,4% ($P<0,05$), in the comparison group reliable increase of pain sense intensity by 50% ($P<0,001$) was determined. At 6 and 12 hours of follow-up, pain intensity was

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significantly lower in the mono- and consecutive courses of NSAIDs than in the comparison group ($P<0.0001$; $P<0.02$).

It should be noted that the decrease in pain intensity during the use of naproxen was statistically significant in all cases, unlike during the use of acetylophenac, where the decrease in pain intensity was not statistically significant. The unreliable nature of changes in pain intensity between the periods of observation in patients using acetylophenac was due to a less pronounced analgesic effect of the latter. A significant reduction in pain during the use of naproxen additionally indicates its more pronounced analgesic effect.

Thus, a mono-course of NSAIDs effectively relieves the feeling of "low intensity" pain. A sequential course has an effective analgesic effect in cases of "moderate to high intensity" pain while using naproxen. With a switch to acetylophenac for high intensity pain, the analgesic effect weakens. The latter may justify prolonging the use of naproxen in cases of 'moderate to severe' pain.

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