SUMMARY

Temporomandibular joint (TMJ) arthritis is an inflammatory process in the TMJ. It’s more common in young and middle-aged people. Among the reasons of the TMJ arthritis development may be the following: local infection (periodontal disease, gingivitis, stomatitis, otitis, tonsillitis, osteomyelitis of the jaw, etc.), general infectious diseases (acute respiratory infections, influenza, pneumonia, dysentery, tuberculosis, syphilis, etc.), allergic diseases, traumatic effects, etc. Para-allergic factors contribute to the onset of TMJ inflammatory processes (hypothermia, overheating, etc.), changes in the endocrine and nervous systems, foci of chronic infection (especially in the oral cavity), etc. The purpose of this pare is to determine the effectiveness of the use of the non-steroidal anti-inflammatory drug “Nimesil” in the complex treatment of acute arthritis of the TMJ.

We observed 64 patients in age from 24 to 65 years who were diagnosed with acute post-traumatic arthritis of the TMJ. Patients were divided into 2 observation groups: 1st group (the main one) – 31 patients who were treated with the nonsteroidal anti-inflammatory drug “Nimesil” and 2nd group (the control one) – 33 patients who were prescribed treatment, including the use of a nonsteroidal anti-inflammatory drug “Indomethacin”.

The duration of the treatment was 7-8 days. After the relieving of acute inflammation, according to indications, prosthetic treatment was carried out. Treatment was carried out in 64 patients with acute post-traumatic arthritis of the temporomandibular joints by comparative use of various non-steroidal anti-inflammatory drugs in different observation groups. It has been proved that the drug “Nimesil” has a more expressed analgesic, anti-inflammatory and antipyretic effect, and also has a significantly smaller number of side effects compared to the drug ”Indomethacin.”
INTRODUCTION

Temporomandibular joint (TMJ) arthritis is an inflammatory process in the TMJ. It’s more common in young and middle-aged people. Among the reasons of the TMJ arthritis development may be the following: local infection (periodontal disease, gingivitis, stomatitis, otitis, tonsillitis, osteomyelitis of the jaw, etc.), general infectious diseases (acute respiratory infections, influenza, pneumonia, dysentery, tuberculosis, syphilis, etc.), allergic diseases, traumatic effects, etc.¹–⁶ Para-allergic factors contribute to the onset of TMJ inflammatory processes (hypothermia, overheating, etc.), changes in the endocrine and nervous systems, foci of chronic infection (especially in the oral cavity), etc.²⁻⁷⁻¹⁴

The purpose of this article is to determine the effectiveness of the use of the non-steroidal anti-inflammatory drug “Nimesil” in the complex treatment of acute arthritis of the TMJ.

MATERIALS AND METHODS

We observed 64 patients in age from 24 to 65 years who were diagnosed with acute post-traumatic arthritis of the TMJ. Patients were divided into 2 observation groups: 1st group (the main one) – 31 patients who were treated with the nonsteroidal anti-inflammatory drug “Nimesil” and 2nd group (the control one) – 33 patients who were prescribed treatment, including the use of a nonsteroidal anti-inflammatory drug “Indomethacin”. The duration of the treatment was 7-8 days. After the relieving of acute inflammation, according to indications, prosthetic treatment was carried out.

Patients of the 1st observation group were treated with a non-steroidal anti-inflammatory drug “Nimesil” (Laboratorios Menarini S.A., Barcelona, Spain) – international name: Nimesulide (registration certificate number in Ukraine: UA/1445/01/01). The examined patients took the drug after food, 2 times a day for 7-8 days. After the relieving of acute inflammation, according to indications, prosthetic treatment was carried out.

All patients underwent clinical examination methods, which included: examination (the severity of facial asymmetry, edema, hyperemia and infiltration of the mucous membrane in the area of the pathological focus), palpation. To assess the intensity of pain, we used the well-known verbal pain assessment – the visual analogue scale (VAS) – a method available to any dental department. The visual analogue scale is a ruler 10 cm long, according to which the patient is asked to rate his pain from 0 to 10 points. The absence of pain corresponds to 0 points. Unbearable pain – 10 points. Pain assessment: very severe pain (10 and 9 points), severe (8, 7, and 6 points), moderate (5, 4, and 3 points), weak (2 and 1 point), and no pain (0 points).

RESULTS AND DISCUSSION

The results of the examination of the pain intensity in patients of the 1st observation group (main group) according to the VAS in the dynamics of the treatment are presented below. Before starting treatment, 100% of the examined patients of the 1st observation group had severe (by 8, 7 and 6 points) pain. The next day after the start of the treatment in patients of the 1st observation group (when treated with the drug “Nimesil”), severe pain (8, 7 and 6 points) was found in 27 patients (87.1%), average severity of pain (5 points) – in 4 patients (12.9%). On the 3rd day of the treatment, severe pain was detected in 14 patients (in 45.2%), and average severity (5, 4 and 3 points) – in 17 patients (54.8%). On the 5th day of the treatment of pain in the 1st group, the results were following: average (3 and 4 points) – in 12 patients (38.7%) and weak (2 and 1 points) – in 19 patients (61.3%). On 7-8 days of the treatment, pain in the 1st group was as follows: weak (1 point) – in 7 patients (22.6%) and there was no pain – in 24 patients (77.4%).

Side effects on Nimesil were observed in 5 patients (16.2%): Hypertension and tachycardia were observed by us in 1 patient (3.2%), nausea, diarrhea and pain in the epigastric region – in 2 patients (6.5%), drowsiness – in 2 patients (6.5%). Side effects disappeared on their own after the end of the drug intake. The drug “Nimesil” showed good tolerance, no changes in blood and urine patterns.

The results of the examination of the pain intensity in patients of the 2nd (main) observation group according to the visual analogue scale (VAS)
in the dynamics of the treatment are presented below. Before the start of the traditional treatment, 100% of the examined patients of the 2nd observation group had severe (by 8, 7 and 6 points) pain. On the next day after the start of the treatment in patients of the 2nd observation group (with traditional treatment), severe pain (8, 7 and 6 points) was found in 32 patients (97.0%), average pain severity (5 points) – in 1 patient (3.0%). On the 3rd day of the traditional treatment, severe pain was detected in 23 patients (69.7%), and average pain (5, 4 and 3 points) – in 10 patients (30.3%). On the 5th day of the treatment, pain in the 2nd observation group was as follows: weak (2 and 1 points) – in 22 patients (66.7%) and there was no pain – in 11 people (33.3%).

Side effects were noted in 13 patients (39.4%). Side effects on “Indometacin” were as follows: headache and dizziness – in 2 patients (6.0%); nausea, vomiting, loss of appetite and pain in the epigastric region – in 5 patients (15.2%), drowsiness – in 3 patients (9.1%), allergic reactions – in 3 patients (9.1%). Side effects disappeared on their own after the end of the drug intake.

Thus, on the basis of these examinations, it can be argued that the treatment with the drug “Nimesil” is a more effective in decreasing the total body temperature in patients with acute post-traumatic arthritis of the TMJ compared with the group of patients treated with the drug “Indomethacin.”

CONCLUSIONS

Treatment was carried out in 64 patients with acute post-traumatic arthritis of the temporomandibular joints by comparative use of various non-steroidal anti-inflammatory drugs in different observation groups. It has been proved that the drug “Nimesil” has a more expressed analgesic, anti-inflammatory and antipyretic effect, and also has a significantly smaller number of side effects compared to the drug “Indomethacin.”

AUTHOR CONTRIBUTION

Conceptualization: Tymofieiev OO. Data and interpretation acquisition: Tymofieiev OO, Havlytiuk D, Sokoliuk M, Ripa VM, Kolisnichenko LA. Drafting of the manuscript: Sokoliuk M. Critical revision of the manuscript: Tymofieiev OO. Approval of the final version of the manuscript: all authors.

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