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EVALUATION AND IMPROVEMENT ORAL HYGIENE IN THE PATIENTS WITH MANDIBULAR FRACTURES.

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Introduction.

The problem of injuries in the maxillofacial region is one of the topical problems of dental surgery. During the last years there has been a tendency in both increasing the number of patients and the complications of these injuries. Oral health of a person with fractured jaw also affects the prognosis of the treatment. Oral hygiene, periodontal diseases, caries and its complications are the factors that influence the fracture area and worsen patients' conditions. Hygiene measures include special treatment of the patient's oral cavity performed by dedicated physicians during the process of bandaging and self-cleaning the mouth area by the patient himself. Metal dental splints, wired and nylon ligatures, lack of mandible's movement are the etiological moments that can deteriorate the process of mouth and teeth self-cleaning using saliva and solid food parts as well as becoming the place of local food particles' retardation. Within these circumstances, additional measures of oral health are crucial in order to prevent complications such as stomatitis, gingivitis and secondary development of the inflammatory process in the fracture gap. Improved treatment of the patients suffering the jaws' fractures may be achieved by early predictions, prevention of inflammatory complications and local therapy optimisations.

Purpose and objectives

The purpose of our study was to develop new means of oral hygiene that will reduce microbial contamination of dental splints, prevent the formation of soft scurf and improve oral health in general.

Materials and methods.

We have observed 20 patients with mandibular fractures who were treated in Vinnitsa City Ambulance Hospital and Vinnitsa Regional Clinical Hospital Named After N.I.Pirogov. The group consisted of patients with mandibular fractures who were treated using traditional tools and methods of oral hygiene (teeth brushing with

semirigid toothbrushes, "Blend-a-Med Complete" toothpaste and "Oral-B" mouthwash). The same methods of oral hygiene were used in the study group which were expanded with decamethoxin-containing fluoride varnish coverage of dental splints. Effectiveness of new hygiene means were measured, conducting research indices of oral health status (Fedorova-Volodkina, Silnes Loe, PMA, CPITN indices). Assessments were carried out on the first day of treatment, on the 7th and 14th days. Patient selection was performed on the bite basis - the study contained patients with direct and orthognathic bite.

Results

After analysing the comparison group of patients, it was noted a slight increase of all indices on the first day (Fedorova-Volodkina - 2.2; Silnes Loe - 1; PMA - 0,17; CPITN - 0,6). In a week upon clamping the Tihershtedt splints (7th day), oral hygiene has significantly deteriorated. The deterioration of oral health during this period is related to the jaw fracture flow period - namely, the patients have observed pain, fear and inability of handling oral treatment in the conditions of new splints' presence and impossibility of opening the mouth. At the end of the second week (14th day) upon the imposition of splints, the state of oral health has slightly improved comparing to the previous period, but the rates were significantly higher than the corresponding rates during hospitalisation (Fedorova-Volodkina - 3.52; Silnes -Loe - 1,74; PMA - 0,88; CPITN - 2,02).

At the time of admission the data of study group hasn't significantly differed from the comparison group. While on the 7th and 14th day the oral health indicators were significantly better (Fedorova-Volodkina index has received - 2.86; Silnes Loe - 1,1; PMA - 0,3; CPITN - 0.9).

Conclusions

Consequently, the use of decamethoxin-containing ftorlak coverage technology of the dental splint designs for mandible fractures reduces the oral hygiene indices. This demonstrates the feasibility of the given preparation to counteract the formation of soft scurf and inhibit occurrences of periodontal tissues' inflammatory diseases for the patients with jaw fractures.