Elimination Of Perforation Of The Bottom Of The Maxilla Jaw Sinus With Application Of Osteoplastic Material

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ABSTRACT: The article reflects the results of the study on the main properties of the Collapan - L drug (Linkomycin), which is a combination of synthetic hydroxyapatite and lincomycin in odontogenic sinusitis with perforation of the maxillary sinus among patients treated in the Department of Maxillofacial Surgery of the Samarkand City Medical Association. The results obtained, the study proves the effectiveness of the use of the Collapan-L preparation in complex treatment in odontogenic sinusitis with perforation of the maxillary sinus bottom.

INTRODUCTION

Perforation of the bottom of the maxillary sinus is one of the most common complications that occur directly during the operation of removing the teeth of the upper jaw. The resulting communication of the oral cavity with the maxillary sinus requires the doctor to take urgent measures to close the defect, since the Oro-antral anastomosis is in the future the gateway for the penetration of odontogenic infection from the oral cavity into the sinus cavity[2; 3; 9; 10]. A significant number of papers have been devoted to the diagnosis, prevention, and treatment of maxillary sinus perforations [2; 5; 7].

With traditional methods of treatment, the bone defect is slowly restored, only the mucous membrane is sutured, which leads to a violation of the shape of the alveolar
process and often leads to divergence of the wound edges and the formation of persistent fistulas [2; 5; 7].

Recently, directed regeneration of bone structures has been widely used. The scientific and specialized literature covers a number of clinical methods of treatment of this category of patients using various osteoplastic materials [1; 3; 4; 6; 8-11; 13]. Unfortunately, many of the drugs used have some disadvantages, which dictates the need to search for new, more advanced materials [1; 5; 6; 10-12].

Currently, given the large number of operations to close the oroantral message, it is also relevant to search for a method for preventing inflammatory complications.

**Material and methods.**

We examined 21 patients with perforation of the bottom of the maxillary sinus without pronounced clinical and radiological signs of sinusitis, who were hospitalized in the Department of maxillofacial surgery of the city medical Association of Samarkand from 2018 to 2019. Most often, perforation of the maxillary sinus occurred in males. Oro-antral perforation occurred more often when the first molars were removed, and less often when the second molars of the upper jaw were removed.

Depending on the tactics of surgical treatment, patients with perforations of the maxillary sinus floor were divided into 2 groups. In group 1 patients, Oro-antral perforation was eliminated using trapezoidal flaps in the transitional fold, at the level of perforation without the use of osteoplastic materials. Patients in group 2 were filled in with a bone defect in the perforation zone using an osteoplastic material called Collapan-L (Lincomycin), which is a combination of synthetic hydroxyapatite and lincomycin.

The terms of admission of patients to the clinic from the moment of occurrence of oroantral anastomosis were different. 41.6% of patients were admitted to the Department within the first day after tooth extraction. When examining patients, clinical and anamnestic data were taken into account, including complaints, the age of formation of the Oro-antral message, its localization, size, as well as the results of additional research methods.

X-ray examination, in addition to standard methods, included computed tomography (CT), based on its results, the condition of the bone tissue of the operated area was evaluated within 3, 6, 12 months.

In patients with oral messages, the mucous membrane was sutured under the perforation zone from the vestibule of the mouth to the palate. If necessary, an additional incision was made along the Palatine side at a distance of 5 mm inside of the Oro-antral defect.
Results and discussion.

Analysis of the terms of epithelization of the wound surface showed that in patients of group 1, wound epithelization averaged 7 days, in patients of group 2-5 days. Group 2 had earlier hemostasis, fewer relapses, edema, pain syndromes, and accelerated healing of soft tissues of the wound surface compared to group 1. The obtained data were confirmed during repeated CT studies conducted in the postoperative period after the Oro-antral anastomosis plastic surgery.

Data from x-ray studies in group 2 patients confirmed that bone regeneration in the area of the defect was completed by 3-4 months. Complete recovery of bone tissue occurred by 6 months of follow-up. In patients of group 1, the recovery of bone tissue in the early stages was much slower. The results of the clinical course of the postoperative period indicate that the introduction of the drug "Collapan-L" into the bone cavity reduces the intensity of the main clinical signs (pain, edema, temperature reaction) compared to group 1.

Inflammatory phenomena of the sinus mucosa significantly inhibited the transport function of the ciliated epithelium until it was completely blocked. The dynamics of restoring the time of mucociliary transport of the sinus mucosa to the nasal cavity depended on the duration of perforation – the earlier the patient underwent surgery to eliminate the Oro-antral defect, the faster the functions of the sinus mucosa were restored. In cases of elimination of "fresh" perforation (up to 3 days), the nasal and maxillary sinus mucosa was practically not subject to reactive postoperative phenomena and local inflammatory processes caused by the pathological process were quickly stopped.

Thus, the developed therapeutic and diagnostic algorithm makes it possible to reduce the duration of treatment of patients by an average of 2-3 days, prevent postoperative inflammatory complications, thereby preventing the occurrence of maxillary sinusitis, and reduce the risk of relapse of postoperative Oro-antral communication. The developed method of eliminating the Oro-antral defect allows not only to prepare the alveolar process of the upper jaw for further prosthetics, but also contributes to the rapid restoration of the transport function of the nasal mucosa and maxillary sinus.

Conclusions.

The choice of the method of plastic closure of Oro-antral perforations depends on the size of the bone defect, the size of which should be determined using computed
tomography. The use of osteoplastic materials to fill an Oro-antral bone defect is an effective and reliable method of restoring bone and soft tissues in the area adjacent to the maxillary sinus.

Literature:


