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ENHANCEMENT TREATMENTS OF METHODS OF RADICULAR CYSTS OF JAW

Abstract: The experience of surgical treatment of 36 patients hospitalized for small in size radicular cysts of the upper and lower jaws is presented. After the operation of cyst ectomy in the main group of patients, the residual bone cavity was filled with osteoplastic drug “Kollapan” and platelet-rich fibrin, which showed significant advantages over traditional methods of treatment of radicular jaw cysts.

Key words: radicular cysts of jaws, osteoplastic drug, residual bone cavity.

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Introduction

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Jaw cysts take first place among other odontogenic formations. They are found in people of different ages, are formed on the upper jaw 3 times more often than on the lower. In the outpatient practice of surgical dentistry, radicular cysts make up 78-96% of the total number of cysts and 7-12% of the total number of diseases of the jaw. These figures indicate the relevance of the treatment of this pathology. [1,4].

The priority tasks of surgical treatment of patients with radicular cysts are restoration of bone structure and preservation of dental functions. The main method of surgical treatment remains cystectomy with resection of the root apex. [6]. The disadvantages of the Parch-II cystectomy technique include a decrease in the function of teeth located in the area of the cyst, reinfection and residual bone cavities that reduce bone strength. Violation of the integrity of the bone in the area of surgical intervention is often associated with prolonged

healing, the outcome of which is incomplete or inferior restoration of bone tissue. [2].

II.Literature review

Enhancement in the methods of surgical treatment of radicular cysts can lead to a significant decrease in indications for the removal of causative teeth. One solution to this problem is to fill in the residual cystic cavities with bone-plastic materials. Their active use involves reducing the postoperative period, strengthening the teeth involved in the cystic process, reducing complications and accelerating bone maturation. But clinical experience has shown the low efficiency of some materials, especially with significant sizes of bone defects, since they are not always completely replaced by bone, but are encapsulated by connective tissue, support chronic inflammation, enhance bone resorption or are partially rejected. [5]

In this regard, the choice of such a treatment method that uses materials that meet modern requirements is of particular importance. Osteoplastic preparations should have such parameters as the absence of toxicity, bacterial and viral safety, full

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biodegradability, biocompatibility, a combination of the properties of osteoconductivity and osteoinductance. [6]

One of the directions in the reconstructive surgery of the jaw bone tissue is the use of platelet-rich plasma, which has a combined reparative effect on hard and soft tissues due to the activated platelets contained in it with growth factors, fibrin and white blood cells and does not cause toxic or immune reactions. The peculiarity of using osteogenesis optimization tools is that they show their positive qualities at certain stages of bone restoration. [3]. Therefore, the combined use of biocomposite osteoplastic materials and platelet-rich autoplasm suggests the creation of optimal conditions for bone formation by reducing the inflammatory response of tissues and effective influence on the mechanisms of ossification.

The aim of this study was to optimize the methods of surgical treatment of radicular cysts by using the biocomposite material “Kollapan” and platelet-rich fibrin to fill a postoperative bone defect.

III. Analysis

The results of surgical treatment in 36 patients after cystectomy of the radicular cysts of the upper and lower jaws were analyzed. Patients were treated in the Department of Maxillofacial Surgery of the Bukhara Multidisciplinary Medical Center, which is the clinical base of the Department of Surgical Dentistry of BSMI. Patients were between the ages of 25 and 45, of which 24 were men and 12 were women. All patients, depending on the method of treatment, were divided into two groups: the first - the control group included 22 patients, of which 15 were men and 7 women received traditional treatment - cystectomy with resection of the root apex; the second - the main group consisted of 14 patients, of which 9 were men and 5 were women who were treated in a complex manner. The last group of patients after cystectomy did not undergo resection of the root apex, and the residual bone cavity was filled with biocomposite material “Kollapan” and platelet-rich fibrin.



In photographs 1. and 2. the stages of cystectomy and filling of the residual bone cavity with Kollapan granules are fixed. Patient M. 38 years old.

As antibiotic therapy, all patients were injected intramuscularly with cefazolin injections of 1.0 gram 3 times a day with an interval of 8 hours. All patients, regardless of the treatment, spent 10 days sparing hygiene in the postoperative area and frequent rinsing of the oral cavity with furacilin solution. An

antihistamine “Tavegil” (0.001 g) was prescribed, 1 tablet at night and, in the presence of pain, the analgesic drug “Ketonal”, 1 ml intramuscularly. In the area of sutures, patients were recommended to apply the application of “Solcoseryl” dental adhesive paste 2-3 times a day on their own.

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Photo 3. View of the postoperative wound after suturing.

IV. Discussion

In patients of the control group, in whom, after cystectomy with resection of the root apex, the residual bone cavity was filled with turunda with an antibiotic, the bone defect was eliminated within 45-50 days. In patients of the second group, due to the use of the biocomposite material "Kollapan" in the postoperative period and fibrin enriched with platelets, a positive clinical effect was achieved already on the 25-30th day after surgery in the form of no signs of inflammation and complete replacement of the residual cavity with full bone tissue.

The combined use of biocomposite osteoplastic materials and platelet-rich autoplasm suggests the creation of optimal conditions for bone formation by reducing the inflammatory response of tissues and effective effect on the mechanisms of ossification. The use of the studied complex treatment in the wide practice of surgical dentistry will increase the effectiveness of treatment of patients with radicular cysts, reduce the recovery time of postoperative bone defects of the jaw bones. According to clinical research methods, it was found that the use of osteoplastic material "Kollapan" and platelet-rich fibrin to fill a postoperative bone defect reduces the

severity of pain and postoperative collateral soft tissue edema, and reduces the time of wound epithelization. According to the X-ray examination, an acceleration of the process of restoration of bone beams in the postoperative defect was revealed. After 6 months, mature bone tissue was determined in the postoperative bone defect.

A cystectomy in patients with jaw radicular cysts performed by the traditional method reduces the activity of secretory and cellular mechanisms of local immunity in the oral cavity with a complete restoration of the initial parameters a month after the operation.

V. Conclusion

A cystectomy using osteoplastic material "Kollapan" and platelet-rich fibrin stimulates the activity of secretory and cellular mechanisms of local protection, increasing the number of functionally active neutrophils in the oral cavity with their high phagocytic ability. In addition, this contributed to an increase in the number of immunoglobulin-producing lymphocytes in the oral cavity, which prevented the immunosuppressive effect of surgery.

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