

Materials and methods of clinical research

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Annotation. It was developed by the Dentium company in the experimental and clinical part of scientific research "OsteontmIISollagen" Regenerative properties of the drug and specificity of use were studied.

Keywords: OsteontmIISollagen, patients, chemical composition, Sinus lifting

"OsteontmIISollagen" It is a material with osteoinductive and osteoconductive characteristics, with micro- and macro-pores, cylindrical porous structure. According to the manufacturer, this material is a preparation with strong osteoconductive potential and high durability. "OsteontmIISollagen" material is considered an optimal product that combines the qualities mentioned above. The composition is 30% hydroxyapatite and 70% combined bone graft based on xenomaterial consisting of tricalcium phosphate. Non-absorbable hydroxyapatite and absorbable β -tricalcium phosphate. The reason for combining calcium phosphate is that β -tricalcium phosphate is absorbed and starts bone regeneration, while hydroxyapatite acts as a framework, maintaining the shape for a long time. The chemical composition of this material is the chemical composition of human bone is close to it.

According to Lee EU research "OsteontmII Sollagen" It is very biologically compatible and has osteoinductive properties, while keeping a specific place in the field of bone defects due to slow resorption. "OsteontmII Sollagen" When talking about its properties, it has a high level of absorption, easy accumulation in the defect area, and high moisturizing properties due to the fact that it contains β -tricalcium phosphate. The size of the particles is 200 μ m, the degree of porosity is 70%. The material is produced on an industrial scale in the form of a cylinder with a porous structure of 6x5, 10x5 mm.

"OsteontmII Sollagen" synthetic osteoconductive considered a bone graft, composed of 30% hydroxyapatite (HA) + 70% beta-tricalcium phosphate. (β -TCP) and type I natural collagen. "OsteontmII Sollagen" a joint similar to the structure of human cancellous bones It has a porous structure. Sterilization by gamma radiation will be opened.

"OsteontmII Sollagen" according to the medical instructions of the drug, it can be used in the following cases of surgical dentistry and maxillofacial surgery:

- In the treatment of post-traumatic mandibular defects
- Filling the defect area after cystectomy
- Sinus lifting
- In the practice of tooth root tip resection
- In periodontal surgery
- When filling the space of the extracted tooth
- When filling the cavity in the perforation of the mandibular cavity and mandibular canal
- In the practice of bone augmentation, that is, bone growth
- In the treatment of alveolar septal atrophy

That's why "Osteontm IICollagen" it is also used in the fields of implantology, eye surgery, oral cavity surgery.

2.1. Clinical examination method

In order to evaluate the post-operative condition of rabbits in both groups, a diary was kept to record the local and general condition indicators.

The following indicators were monitored:

• Level of activity in behavior: active behavior, partially active behavior, slow behavior, low behavior;
• Level of nutrition: normal appetite, satisfactory appetite, loss of appetite, refusal to eat;
• Fluid intake: moderate, reduced, minimal fluid intake, fluid rejection;
• Body temperature:
• Condition of wound sutures: satisfactory, unsatisfactory
• Swelling in the wound area: no swelling, imperceptible swelling, partial swelling, diffuse swelling
• Hyperemia: Redness of the operative wound, absence of redness;
• Soreness (on palpation) pain is observed, not observed;
• Indicator of wound healing: primary healing, secondary healing;

Table 2.1. Criteria for assessing the general and local condition of patients.

2.2. Materials and methods of clinical research.

In order to study the reparative effect of osteoplastic material "OsteontmII Sollagen", comprehensive examination and treatment of 117 patients with fractures of lower jaw bones was carried out.

In the course of research, the effectiveness of surgical treatment of jaw bone defects using "OsteontmII Sollagen" osteplastic materials was studied. According to the results of clinical and instrumental studies, a comparative assessment of the effectiveness of regeneration stimulants used in the mutual and control group was carried out.

The patients underwent clinical laboratory and X-ray examinations in the Department of Maxillofacial Surgery of the 7th City Clinical Hospital of Tashkent city. The patients were aged between 18 and 60 years.

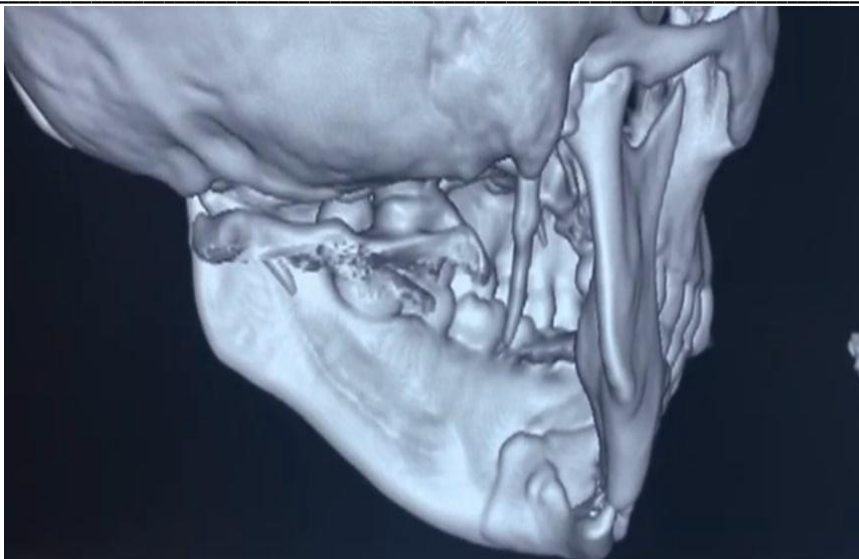
2.3. Clinical examination structure

From 2016 to 2019, 290 patients with mandibular fractures were treated. In 117 of them, due to the formation of a post-traumatic defect in the area of the fracture, bone material was used in 79 of them, and in the remaining 38, operative treatment was performed without the use of osteoplastic material. 102 of them were men and 5 were women.

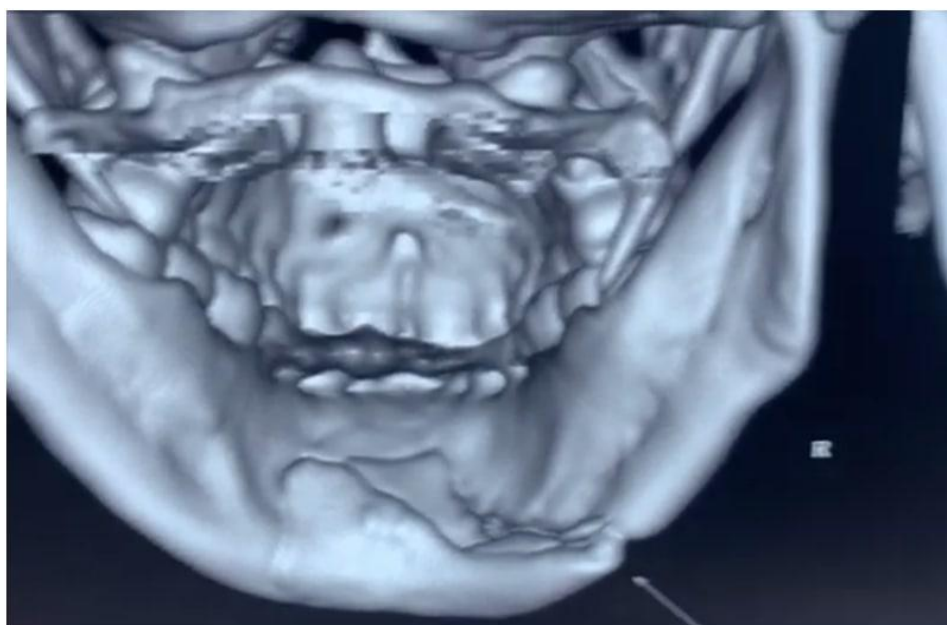
Patients were divided into three groups according to the size of the defect in the fracture area. In the first group, depending on the location of the injury, it was divided into the areas of the trunk, body, and corners (Table 2.7). Measurement of the size of jaw injuries was performed by analyzing orthopantomography images and studying computer tomograms (CT) data.



2.2. picture A comminuted fracture of the lower jaw. MSKT inspection. Internal view of the lower jaw.



2.2. picture A comminuted fracture of the lower jaw. MSKT inspection. Internal view of the lower jaw.



2.3. picture A comminuted fracture of the lower jaw. MSKT inspection. Internal view of the lower jaw

All patients were divided into 2 groups. The first main group consisted of 79 patients, postoperative defects were filled with osteoplastic material "OsteonTMIICollagen". The second, control group consisted of 39 patients, whose postoperative defects were filled with a blood clot. (Table 2.2).

Fracture area	Main	Control
Dahan	35	15
Body	28	13
Angle	16	10
General	79	38

2.2. table. Distribution of fracture lines by location in patients selected for the study.

Thus, the total number of patients with mandibular fracture was 117, of which 79 were in the first main group ("OsteonTMIICollagen"), 38 were in the second control group.

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