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Research Article

FEATURES OF MANDIBULAR FRACTURES

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ABSTRACT

In order to prevent some of the observed complications from the above-mentioned methods of treatment, i.e. Kirschner needle, bone sutures, during the development of medicine, titanium microscrews and miniplates are being used for modern treatment. By using microscrews and miniplates, it has been possible to achieve stable fixation of fracture fragments and treatment of mandibular fractures by non-burning method.

KEYWORDS

Methods of treatment, i.e. Kirschner needle, bone sutures, during the development of medicine, titanium microscrews and miniplates

INTRODUCTION

Thus, when special medical services are provided to patients, operative or conservative treatment methods are used. In some treatment methods, various complications can be observed from 5.5% to 41% (Shargorodsky A.G. 2000y.; Dmitriev V.V. 2000y. Krasnyy A.G. 2000; Dufash I.Kh., 2003; Uvarova A.G. 2004; Malyshev V.A., Kadyrov M.Kh., 2005; Belchenko

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V.A., 2006; Telnykh R. Yu. 2008; Magomedgadzhiev B.G. 2008; Benson PD 2006. Ernes Y., 2009.).

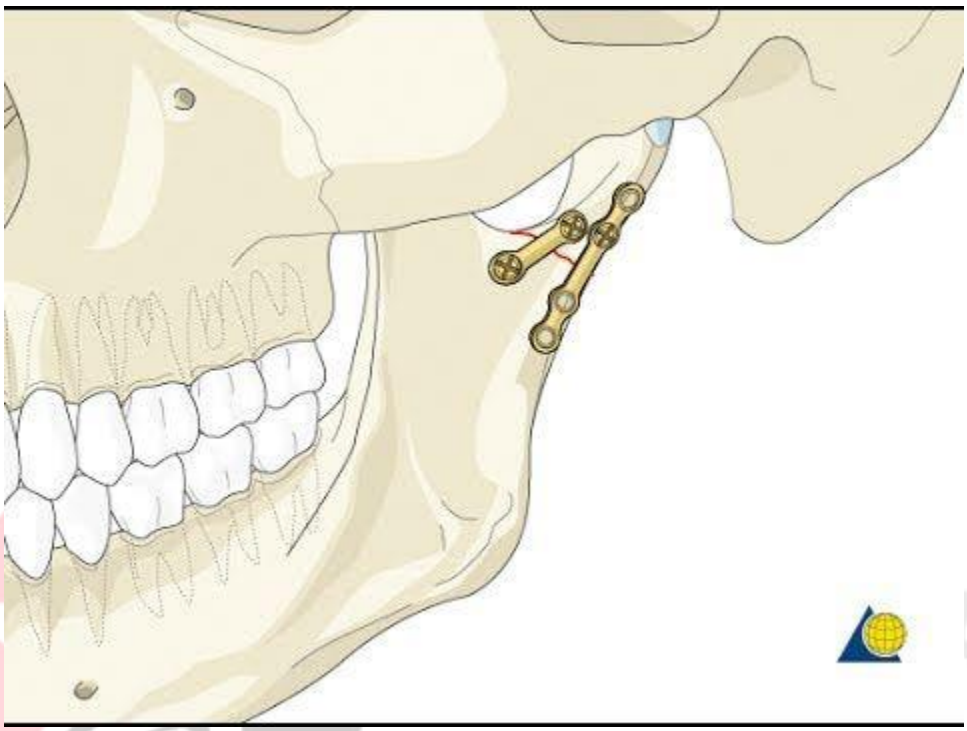

Figure 1. Schematic representation of the osteosynthesis operation in the case of fracture of the joint growth.

Posttraumatic complications can be caused by general and local factors. Common factors that slow down the osteoreparation process include diseases and conditions that reduce the body's reactivity and slow down bone regeneration: tuberculosis, hypovitaminosis, dystrophies, cardiovascular diseases, metabolic disorders, brain injuries, patient's age (Yaroshkevich A.V. 1990; Stryuk E.V., 1990; Ruzin G.P. 2007; Sivtseva T.A. 1993; Yakubov R.K. 1994; Makarenko V.V. 1998; Durnova E.A. 1998; Kontorshikova K.N. 1992, 2000; Volozhin A.I., 1996. Robustova T.G. 1995.; Shirokov V.Yu., 1997; Shvyrkov V.Yu., 1999; Macias J. 1993 y.; Small EW 1994 y.). Limitation of the chewing process associated with the movement of the jaws of patients leads to a violation of the chewing process, which affects their general condition and slows down the ossification process in the case of a fracture or post-traumatic defect (Karapetyan I.S. 1989; Mirzakulova U.R. 1992; Shmat S. .M. 1992;). Slow consolidation of bone fractures is related to the state of the body's immunity (Askalonov A.A., 1983; Kargopolova I.I. 1987; Asnina S.A. 1988;

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Filippov S.V. 1996; Melengberg T. V. 2001; Astakhanov A.S., Pachenko V.M. 2002). 1987; Asnina S.A. 1988; Filippov S.V. 1996; Melengberg T.V. 2001; Astakhanov A.S., Pachenko V.M. 2002). 1987; Asnina S.A. 1988; Filippov S.V. 1996; Melengberg T.V. 2001; Astakhanov A.S., Pachenko V.M. 2002).

Local factors that cause complications in the field of bone fractures include failure to go to the hospital in time, insufficient immobilization of fragments, interposition of soft tissues, presence of infected teeth in the fracture line, lower alveolar nerve trauma, insufficient blood supply to bone fractures (Pankratov A.S. 1995y ; Shvyrkov M.B. 1999.; Dmitriev V.V. 2000.; Shargorodsky A.G. 2004.; Borovoy V.N. 2000.; Bakhteeva G.R. 2012.; Dmitrilous G. 1991.; Willson R. ., 1999, Erness Y., 2009.).

1.2. Contemporary Thoughts on Bone Regeneration.

Restoration of lost tissues is one of the evolutionary features of living organisms. Therefore, regeneration processes have been attracting the attention of scientists for a long time (Dukas L., Bonnick SL 2005y.; Ivaska KK 2005y.; Shulman L., 2006y.). In a broad sense, regeneration is the natural replacement or replenishment of parts lost or separated as a result of a pathological and traumatic process with various cells and tissues. The regeneration process is traditionally divided into two types:

1) Physiological.

2) Reparative.

Physiological regeneration (remodeling, remodeling) - replacement of cells and tissues after their loss, which occurs during normal life activity of the organism. Such processes can be seen in the skin epithelium, mucous membranes, as an example of the blood-vascular system. Skeletal bones, which form the basis and support of the body, are constantly renewed due to physiological remodeling that occurs simultaneously with resorption and bone formation.

Remodeling has three tasks:

1) changing the structural anatomy of the tissue in the following way, the trabeculae and structures under the influence of movement and pressure are maximally strengthened, the bone beams under less influence become thinner and undergo bone resorption in this area (Wolff's law: form is the result of function).

2) control of calcium and mineral homeostasis; remodeling occurs only in some structures, the number of which can reach several million;

3) the growth factors fall into the bone tissue in the form of deposits in the circulatory area, exerting not only its physiological effect in the immediate area, but also as a regulator in the distant areas (Desyatnichenko K.S. Baldin Y.P. 1995y.; Garnero R. Piperno M. Gineyts.S. 2004. Sarkar S., Reginster JY, Crans GG et al. 2004.

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Charles H. Chesnut I, Sharmilla Majumdar, David C. 2005. Cheng S., Nenonen A. Ivaska KK et al., 2005. .).

Physiological bone regeneration of the facial skeleton is a multi-step process of modeling as the bone grows in length and width. During this period, it acquires its own character, the bone barriers between the teeth and between the roots develop.

In the internal structure of the growing bone, the process of remodeling (remodelling) corresponding to the functional pressure and change of the jaw apparatus is characteristic. These processes are more active in the alveolar bone than in other skeletal bones.

Restoration of cells and tissues in tissues and organs after various pathological processes or injuries is called reparative regeneration. Physiological and post-traumatic bone tissue regeneration occurs due to cellular elements involved in the reconstruction of bone tissue: periosteal and endoosteal cells, perivascular cells of newly formed vessels, circulating blood of mesenchymal origin (Rodionova N.V. 1999y.; Lalykina K. S. , Friedenstein A. Ya. 1973y.).

The problem of bone tissue regeneration is one of the most relevant and interesting in modern surgery and dentistry. The deficiency of bone tissue of the maxillofacial region occurs as a result of traumatic diseases of the bones of the facial skeleton, intraosseous formations, with complicated extraction, reconstructive interventions, dental implantology, various bone plastic surgeries (A.A. Koroteev.2007) .

It is known that the restoration of volumetric bone defects often takes a long time (up to 4-5 years) and does not always occur in full. The presence of concomitant pathology can contribute to an even greater increase in the terms of regeneration (G.V. Mkrtchyan.2011).

To date, the possibility of controlling the process of osteoreparation through the use of regeneration stimulators of different structure and origin has been theoretically substantiated and clinically proven.

Therefore, the purpose of the dissertation was to study clinically substantiate the effectiveness of the use of synthetic osteoplastic material "Osteon TM II Collagen" in the complex treatment of patients with mandibular fractures with bone defects.

The monograph is a modern scientific work devoted to improving the results of treatment of patients with fractures of the lower jaw.

When reading the introduction, where the relevance of modern surgical treatment of fractures of the lower jaw is argued, the need for its further study, depending on the form and the presence of complications. The work also highlights the anatomical and physiological structure, clinical signs of various types of fractures of the mandible, a comprehensive examination, a

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detailed objective examination, laboratory and instrumental diagnostic methods. The therapeutic tactics before and after the surgical period, modern methods of surgical treatment are described in detail. The monograph is written in an accessible and understandable Russian language and is an excellent guide for doctors of maxillofacial surgeons and other related specialties. It should be pointed out that the work was carried out at a modern scientific and methodological level, has scientific and practical significance.

Effects of osteoplastic material on animals were studied in experiment and clinical practice. Animal experiment 08.2020 Tashkent State Stomatological Institute academician Zufarov K.A. "Department of Medical Biology and Histology" laboratory named after the head of the department Ph.D. Rakhmatova M.Kh. was carried out together with Since 2016, clinical practices have been carried out in the Department of Oral and Maxillofacial Surgery of Clinical Hospital No. 7 of Tashkent city.

As we mentioned earlier, the experimental part of the work was carried out in 30 sexually mature chinchilla breeding rabbits with an average weight of 3.5 kg. In accordance with the purpose of the experiment, 20 animals were used in one of which the osteoplastic material "OsteonTM IICollagen" was used - the main group and one control group in which no drug was used.

The duration of feeding rabbits did not exceed 60 days, taking into account the weekly period of adaptation of animals to new conditions after entering the vivarium and placing them in cages. Animals of different groups were kept separately from food and water during the experiment.

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