

EVALUATION OF PATIENT TREATMENT METHODS FOR TRAUMATIC INJURIES TO THE CONDYLE OF THE MANDIBLE

<https://doi.org/10.5281/zenodo.12747635>

Saidova Diyora Otabekovna

Scientific adviser: Kubaev Aziz Saydalimovich

Samarkand State Medical University

417-group student of the Dental Faculty

Introduction. Among mandibular fractures of different localizations, condylar process fractures pose the greatest difficulty in terms of both diagnosis and treatment. According to various authors, they account for 25-40% of traumatic injuries to the mandible. Currently, the main treatment methods for condylar process fractures of the mandible are conservative (orthopedic) and surgical. To choose the optimal treatment method in everyday clinical practice, a clear justification of indications is necessary depending on the nature, localization of the fracture and the structural features of the condylar process of the mandible.

The aim of the study: is to evaluate the clinical and diagnostic criteria that determine the treatment tactics for patients with condylar process fractures of the mandible.

Materials and methods. The first stage of the study consisted of analyzing archival material from the maxillofacial surgery department of the Republican Specialized Scientific and Practical Medical Center of Traumatology and Orthopedics, Samarkand branch. Clinical and diagnostic criteria determining the treatment tactics for patients diagnosed with "condylar process fracture of the mandible" were evaluated based on 221 medical records of patients treated from 2019 to 2023.

The second stage involved developing clinical and diagnostic criteria and an algorithm for the treatment tactics of patients with traumatic injuries of the condylar process of the mandible. To this end, we conducted an examination and treatment of 60 patients with traumatic injuries of the condylar process of the mandible at the Department of Maxillofacial Surgery, Samarkand State Medical University. The average age of patients was 23-35 years. All examined patients were divided into the following groups depending on the treatment method: group 1 - 30 patients who underwent conservative treatment for condylar process fractures of the mandible; group 2 - 30 patients who underwent surgical treatment for condylar process fractures. Group 2 was divided into three subgroups: subgroup 1 - 11 patients who underwent osteosynthesis of the condylar process of the mandible with titanium mini-plates via a retromandibular

approach; subgroup 2 - 11 patients who underwent osteosynthesis of the condylar process of the mandible with titanium mini-plates via a submandibular approach; subgroup 3 - 8 patients who underwent intraoral osteosynthesis of the condylar process of the mandible with titanium mini-plates.

When choosing a treatment method for patients with this pathology, we were guided by characteristics such as fracture localization; the nature of displacement of condylar process fragments of the mandible; the time elapsed from the moment of injury to hospitalization.

Results. According to retrospective analysis, the most frequently performed treatment method for patients with condylar process fractures of the mandible in the period from 2019 to 2023 was conservative - 175 (83%) patients. While osteosynthesis of the condylar process of the mandible with titanium mini-plates via a retromandibular approach was performed on 23 (11%) patients, and via a submandibular approach on 13 (6%) patients, respectively.

The effectiveness of the treatment methods was determined by fixation of the condylar process fragments of the mandible, as well as by restoration of temporomandibular joint function in the early and long-term periods. A positive treatment outcome was obtained in 55 (31.4%) patients with conservative treatment, 19 (82.6%) with osteosynthesis of the condylar process of the mandible via a retromandibular approach, and 9 (69.2%) with a submandibular approach.

Minor displacement of fragments was observed with conservative treatment in 79 (45.1%) patients, with osteosynthesis of the condylar process of the mandible via a retromandibular approach in 4 (17.3%), and via a submandibular approach in 9 (30.7%).

Significant displacement of fragments after conservative treatment was noted in 41 (23.4%) patients, with osteosynthesis of the condylar process of the mandible via a submandibular approach in 3 (23%). With osteosynthesis of the condylar process of the mandible via a retromandibular approach, no displacement of fragments was detected during this period.

When evaluating the clinical and diagnostic criteria influencing the treatment tactics for patients with condylar process fractures of the mandible, we noted that the least effective treatment method is conservative. According to the results of our clinical study, 30 (100%) patients experienced a number of complications: stiffness of fragments, malocclusion, limited mouth opening of varying degrees, discomfort in the temporomandibular joint area.

The best outcome for condylar process fractures of the mandible was noted in the 3rd subgroup of the study (8 (100%) patients), and the minimum number (1 (12.5%) patient) of complications was also observed in the early postoperative period. This

result can be achieved by using intraoral osteosynthesis of the mandible in the area of the condylar process via a transbuccal approach with endoscopic support. In the 2nd subgroup, the fragments were fixed in the correct position, and TMJ function was restored in 11 (100%) patients, with the number of early complications in the postoperative period among the total number of patients studied being 3 (27%).

Conclusion. The results of retrospective analysis of medical records confirm the effectiveness of surgical treatment compared to the conservative method, particularly the high percentage of positive outcomes with the use of the retromandibular approach. For fixation of fragments in the treatment of condylar process fractures of the mandible with displacement of fragments, to reduce the risk of postoperative complications and restore temporomandibular joint function, it is advisable to use the surgical treatment method.

Clinical and diagnostic criteria determining the treatment tactics for patients with condylar process fractures of the mandible are the time elapsed from the moment of injury to hospitalization, malocclusion, decreased joint height of the mandibular ramus, localization and nature of fragment displacement and changes in soft tissue structures based on the results of multislice computed tomography and magnetic resonance imaging of the temporomandibular joint.