The American Journal of Medical Sciences and Pharmaceutical Research ISSN 2689-1026 Volume 08 - 2026

Improving Treatment Outcomes in Patients with Combined Facial Skeletal Injuries While Taking Oral Hygiene into Account

[1] Baratova Sh.N.
[1] Assistant, Samarkand State Medical University, Samarkand, Uzbekistan

Received: 23th Dec 2025 | Received Revised Version: 30th Dec 2025 | Accepted: 05th Jan 2026 | Published: 10th Jan 2026

Volume 08 Issue 01 2026 | Crossref DOI: 10.37547/tajmspr/Volume08Issue01-03

Abstract

Modern healthcare faces a serious challenge associated with combined trauma. Since the 1990s, the nature of injuries has changed significantly: injuries to multiple anatomical regions simultaneously are now frequently recorded. Today's world, characterized by the increasing number and speed of vehicles, the technological advancement of industry, agriculture, and everyday life, the popularity of extreme sports, and a fast-paced lifestyle, is creating conditions conducive to an increase in injuries not resulting from military action. Stressful situations associated with urbanization also play a role in this trend. Bone injuries to the maxillofacial region account for approximately 3% of all bone fractures in humans. Moreover, a quarter of patients seeking treatment in maxillofacial surgery departments suffer from injuries to this region. Studies show that 14-20% of victims are diagnosed with combined craniocerebral trauma.

Keywords: Departments suffer, maxillofacial surgery, craniocerebral trauma.

© **2026** Baratova Sh.N. This work is licensed under a Creative Commons Attribution 4.0 International License (CC BY 4.0). The authors retain copyright and allow others to share, adapt, or redistribute the work with proper attribution.

Cite This Article: Baratova Sh.N. (2026). Improving Treatment Outcomes in Patients with Combined Facial Skeletal Injuries While Taking Oral Hygiene into Account. The American Journal of Medical Sciences and Pharmaceutical Research, 8(01), 23–25. https://doi.org/10.37547/tajmspr/Volume08Issue01-03

1. Introduction

Facial and neck injuries represent a complex category of injuries. Their complexity is due to the presence of important anatomical structures in these areas: major arteries and veins, nerve pathways, and numerous zones sensitive to irritants. Furthermore, these areas are located in close proximity to vital organs. Facial and jaw injuries often lead to more serious complications. Therefore, when providing emergency care and treating such injuries, it is essential to consider the specific anatomical features of this area. Qualified specialized medical care for victims plays a key role in the prevention and treatment of such injuries.

Reducing the risk of periodontal complications in patients with concomitant maxillofacial injuries remains an important issue in maxillofacial surgery and dentistry.

Patients with severe conditions are referred to the intensive care unit for emergency medical care. Once their general condition stabilizes, particularly if normal breathing is restored, bimaxillary splints are applied. In such cases, self-cleaning of the oral cavity is often impossible for patients. Food debris, blood clots, and fragments of dead tissue accumulate in the spaces between teeth and under dental splints, especially wire splints. This creates an ideal environment for the active proliferation of bacteria, which in turn can lead to periodontal inflammation. In patients with combined facial injuries, maintaining good oral hygiene plays a crucial role not only in removing food debris, plaque, and biofilm from splints, ligatures, teeth, gums, and rubber bands. It also helps prevent the proliferation of microorganisms and creates favorable conditions for more effective and accelerated fusion of jaw fragments.

In this study, we aimed to analyze the oral hygiene situation in patients with combined maxillofacial

injuries, with an emphasis on the prevention of periodontal diseases.

Research approaches and tools

To address these objectives, we analyzed the clinical data of 123 patients with combined facial fractures treated at the maxillofacial surgery service of Samarkand City Hospital. Men predominated (96 patients, or 78.4%), while women constituted a smaller group (27 patients, or 21.6%). The average age of patients was 41 years. To answer the research questions and achieve the stated goal, a comprehensive approach was used, including clinical, radiographic, immunological, and statistical methods. The study group had an average age of 41.4 years, with a deviation of ±1.2 years.

The study aimed to analyze the patients' dental health, with the aim of identifying the relationship between it and medical, biological, social factors, as well as organizational aspects of dental care and medical examinations.

Patients underwent clinical examinations (a total of 123 patients), as well as radiographic (14.5%), computed tomography (13%), multislice computed tomography (72.5%), and immunological studies. The examination also assessed the condition of the temporomandibular joints and the oral mucosa, as well as the integrity of tooth enamel and dentin (presence of caries, hypoplasia, fluorosis, pathological wear, and wedge-shaped defects), as well as the condition of the periodontium. Diagnoses established during the examination were assigned to the appropriate categories according to the International Classification of Diseases (ICD-10). Based on the data obtained, the need for dental treatment was determined. If necessary, patients underwent orthopantomography. Statistics on the prevalence of identified diseases were presented as a percentage of the total number of patients examined with a given condition.

The data was collected and recorded using a special "Dental Status Assessment Card" created by the developers.

Periodontal Assessment.

References

1. Boimuratov Sh.A., Yangiev R.A., and Ibragimov D.D., in their study published in the journal Problems of Biology and Medicine in 2015, investigated innovative approaches to the treatment of combined injuries of the head, face, and abdomen. The article appeared in issue No. 4 (No. 85) of 2015, on pages 34–36.
2. Boimuratov Sh.A., Ashurov A., and Ibragimov D.D. examined and developed methods for early diagnosis and treatment of combined cranio-facial-abdominal pathologies. The findings of their research were published in the journal Doctor's Bulletin in 2016 (issue No. 1, pages 3–5) under the classification number 14.00.00. No. 19.
3. Ibragimov D.D., Gaffarov U.B., and Kuchkarov F.Sh., in their work titled Application of Osteoregenerative Agents in the Treatment of Facial Skeletal Injuries, presented clinical research results published in the journal Problems of Biology and Medicine in 2017. The article appeared in issue No. 4 (98), 1st quarter, on pages 51–52, marked under code 14.00.00. No. 19.
4. Ibragimov D.D. studied the effectiveness of Polyoxidonium in the comprehensive therapy of patients with maxillofacial injuries. The results were published in the journal Problems of Biology and Medicine (issue No. 4 (113), 2019), on pages 45–47. This scientific work was registered under No. 20.
5. Ashurov et al. investigated the occurrence of post-traumatic rhinosinusitis following craniofacial trauma. Their findings were published in the European Science Review in 2016.
6. Ibragimov D.D. and Ismatov F.A. investigated the use of Polyoxidonium in the comprehensive therapy of patients with combined cranial and facial trauma. The results were presented at the International Scientific-Practical Conference Dentistry: Current Issues, held in Tashkent in 2016.
7. Boimuratov Sh.A. and Yusupov Sh.Sh., in their article published in the scientific journal Visnyk naukovykh doslidzhen, discussed diagnostic and therapeutic approaches to orbital floor fractures. The work appeared in 2017 in issue No. 3 of the 88th edition of the journal, published in Ternopil, Ukraine.
8. Ibragimov D.D. proposed a method for restoring facial tissues damaged as a result of explosive injuries caused by mobile phone battery elements. The study was presented at

the XVII International Scientific-Practical Online Conference Trends and Prospects of Scientific and Educational Progress in the Era of Globalization, held in 2016 in Ukraine. The results were published on pages 212–215 of the conference proceedings.

9. Ibragimov D.D. studied the use of immunotherapy in treatment programs for patients with maxillofacial injuries. The work was presented in the proceedings of the First Bukhara International Conference of Medical Students and Youth, held in May 2019 in Bukhara.

10. Ashurov A.M., Boimuratov Sh.A., and Ibragimov D.D. proposed an algorithm for the diagnosis and treatment of frontal sinusitis and sphenoiditis in patients with Ashurov craniofacial pathology. This algorithm was entered into the State Register of Computer Programs of the Republic of Uzbekistan under No. DGU 03593 and registered on February 19, 2016.