



CLINICAL EXAMINATION ANALYSIS OF PATIENTS WITH COMBINED INJURIES OF THE NOSE AND PARANASAL SINUSES

Bakiyeva SH.X.

Karimberdiyev B. I.

Djurayev J. A.

Soatov I. O.

Tashkent State Medical University, Tashkent, Uzbekistan

Abstract

Combined injuries of the nose and paranasal sinuses represent a complex clinical condition characterized by both structural damage and functional impairment. This study aimed to analyze the clinical examination findings in patients with such injuries and evaluate their diagnostic significance. A total of 140 patients were examined using standard clinical methods, including anterior rhinoscopy, palpation, nasal breathing assessment, and radiological imaging. The results showed that clinical examination provides essential information for early diagnosis, allowing identification of deformities, obstruction, and associated complications. A strong correlation was observed between clinical findings and imaging results. The study confirms that clinical examination remains a fundamental component in the diagnostic algorithm and plays a crucial role in improving treatment outcomes.

Keywords: Nasal trauma, paranasal sinuses, clinical examination, combined injuries, ENT.

Introduction

Combined injuries of the nose and paranasal sinuses are frequently encountered in otorhinolaryngological practice and often result from domestic incidents, road traffic accidents, and occupational trauma. These injuries can lead to significant anatomical deformities as well as functional disturbances such as nasal obstruction and impaired respiration. Despite advances in imaging technologies,



clinical examination remains the first and most accessible diagnostic method. It allows rapid assessment of the patient's condition and helps determine the need for further instrumental investigations.

The aim of this study was to perform a clinical analysis of patients with combined nasal and paranasal sinus injuries and to evaluate the diagnostic value of clinical examination methods.

Materials and Methods

This retrospective study included 140 patients with combined injuries of the nose and paranasal sinuses who were treated at a multidisciplinary clinical center. The study population consisted of patients aged 18 to 65 years.

Inclusion criteria were patients with clinically and radiologically confirmed combined injuries involving the nasal bones and at least one of the paranasal sinuses. Patients with isolated injuries or incomplete clinical data were excluded. All patients underwent a standardized clinical examination. Anterior rhinoscopy was performed to assess the nasal cavity, mucosal condition, septal deviation, bleeding, and edema. Palpation of the nasal bones was used to identify fractures, deformities, and abnormal mobility.

Nasal breathing was evaluated based on patient complaints and objective clinical findings. Signs such as airflow obstruction, difficulty in breathing, and asymmetry of nasal passages were recorded.

Radiological assessment included X-ray imaging in all patients and computed tomography (CT) in cases of suspected complex injuries or sinus involvement. Clinical findings were compared with imaging results. The collected data were analyzed using descriptive statistical methods. Results were presented as percentages and frequency distributions.

Results

Clinical examination revealed that the majority of patients presented with evident signs of nasal trauma. Nasal deformities were observed in 68% of patients, while nasal obstruction was reported in 72% of cases. Anterior rhinoscopy demonstrated mucosal edema in 64% of patients, hemorrhage in 48%, and septal deviation in 41% of cases. These findings indicated significant internal nasal involvement following trauma. Palpation findings confirmed nasal bone fractures



in 61% of patients, often accompanied by pain and crepitus. In many cases, fractures were associated with displacement of bone fragments. Clinical signs of paranasal sinus involvement included facial swelling (39%), localized tenderness (44%), and impaired nasal breathing (52%). These symptoms were more pronounced in patients with maxillary and frontal sinus injuries. Radiological imaging confirmed the clinical findings in the majority of cases. A strong correlation was observed between physical examination and CT results, particularly in detecting fractures and sinus involvement.

Discussion

The results of this study confirm the significant role of clinical examination in the diagnosis of combined injuries of the nose and paranasal sinuses. Clinical methods such as anterior rhinoscopy and palpation provide rapid and reliable information, especially in emergency settings. Although imaging techniques such as CT scans offer detailed anatomical visualization, they should complement rather than replace clinical assessment. Early detection of key symptoms through clinical examination allows timely intervention and reduces the risk of complications. The observed correlation between clinical and radiological findings supports the use of an integrated diagnostic approach. Clinical examination remains essential for initial patient evaluation and decision-making.

Conclusion

Clinical examination is a fundamental and indispensable component in the diagnosis and management of combined injuries of the nose and paranasal sinuses. It enables early identification of structural and functional abnormalities and guides further diagnostic and therapeutic measures. The integration of clinical and radiological methods enhances diagnostic accuracy and improves patient outcomes. Therefore, thorough clinical assessment should remain a standard practice in otorhinolaryngology.

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