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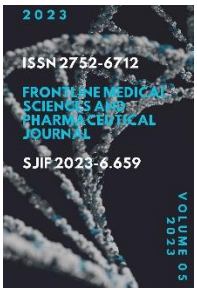

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Research Article

CLINICAL AND ANATOMICAL FEATURES OF NASAL STRUCTURE IN PATIENTS WITH DENTOALVEOLAR DEFORMITIES

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ABSTRACT

Despite significant progress in the development of maxillofacial surgery, the issues of diagnostics, planning and treatment of patients with congenital and acquired deformities of the facial skeleton have not lost their relevance. It should also be noted that when analyzing the shape of the nose, we can distinguish such concepts as aesthetic disproportions and deformities of the back of the nose, nasal pyramid and end section. Aesthetic disproportion is an anatomical feature or combination of characteristics that distinguishes the nose of a particular person from the "ideal" model and is negatively evaluated by this person or others from the aesthetic point of view.

KEYWORDS

Nasal pyramid, morphofunctional, dento-mandibular anomaly, dentoalveolar system, optimal methods.

INTRODUCTION

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Contouring plays a crucial role in obtaining an aesthetic result in nasal backplasty. World statistics show that from 5 to 7% of patients need revision rhinoplasty. Improvement of technologies of rhinoplasty operations and development of new instruments for their performance allow to improve cosmetic results of surgical treatment considerably. However, a comprehensive study of morphofunctional changes occurring in the mucosa during nasal septal deformities has not been conducted so far. Thus, the choice of optimal methods of surgical correction of functional and aesthetic character in external nose deformities combined with nasal septum curvature is the most effective method of surgical rehabilitation of patients with this pathology and saves them from repeated surgical interventions.

The urgent problem is to provide highly specialized care to patients with combined deformities of the nose and dentoalveolar system, simultaneous surgical and orthopedic treatment in order to restore the basic functions of the dentoalveolar system and aesthetic parameters of the face.

Purpose of the study: To investigate the clinical and anatomical features of the nasal structure in patients with deformities of the dentoalveolar system accompanied by nasal breathing disorders and aesthetic nasal deformities.

Materials and methods: 46 patients aged 16 to 45 years were under our observation. There were 28 males and 18 females. All patients had a history of combined trauma to the bones of the facial skeleton.

All patients underwent anthropometric analysis of nasal deformities, radiologic studies, and nasal respiratory function studies. The patients were divided into 2 groups: Group 1 - 32 patients with prevalent deformity of the external nose combined with dento-mandibular anomaly, accompanied by nasal breathing disorders. Group 2 - 14 patients with prevalent deformity of the dentoalveolar complex combined with nasal breathing disorder.

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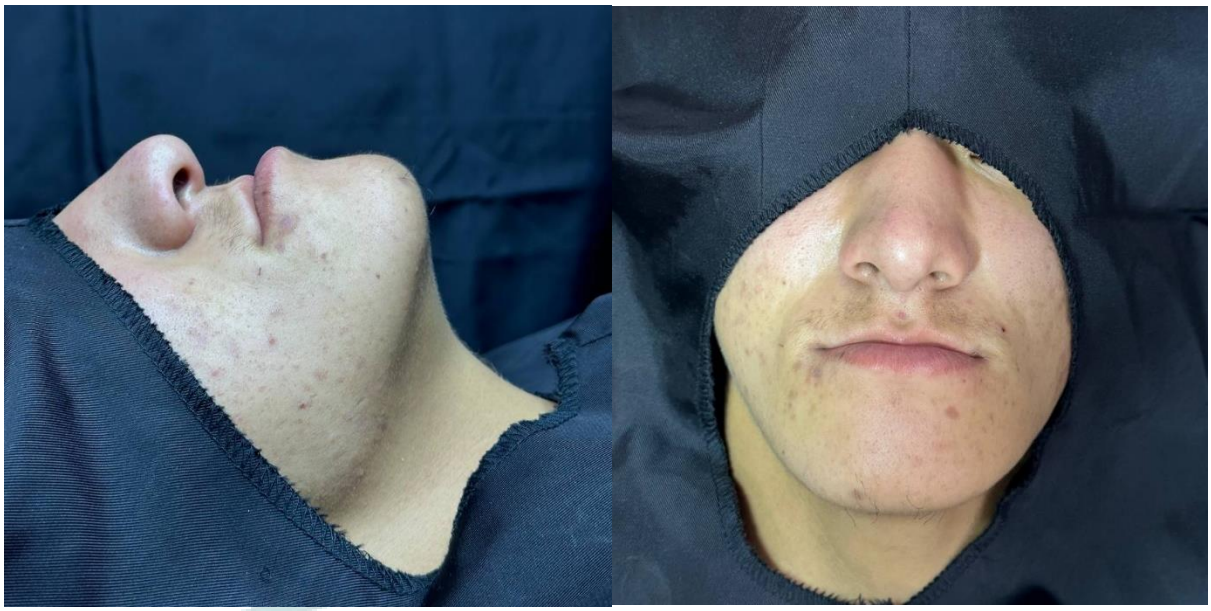

Fig. 1. Full-face, profile and bite of patient M.

Results of the study: Analysis of the profile and facies of the patients we examined showed that the frontal-nasal angle in women averaged 135.4°±1.7, in men 134.2°±2.5; nasolabial angle in women 32.2±0.6, in men 31.4±0.7; nasolabial angle in women 97.5°±2.2, in men 94.6°±2.2. The distance between the bases of the nasal wings averaged 33.25 mm ± 0.9 in women and 38.75 mm ± 0.6 in men. These values are individual for each patient separately and slightly differ from the standard norms. Considering the frequency of scoliotic changes of the nose (lateral displacement or obliquity) it is necessary to say that this pathology is quite common in patients with dentoalveolar anomalies equally between the second and third skeletal classes and is caused mainly by posttraumatic genesis of the deformity. The side of scoliotic (laterally displaced) changes is determined by the direction of action of the traumatic force, in the case of traumatic genesis of rhinoscoliosis.

Conclusions: Thus, patients with dentoalveolar anomalies have a significant variety of clinical manifestations of deformities of the external nose and intranasal structures. In the majority of patients dentoalveolar anomalies are combined with a humped nose - 42% and with depression of the back of the nose (saddle nose) - 32%, as well as with other types of deformities of the

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external nose - lateral displacement of the nose (obliquity) - 22%. Nasal septal deviation with impaired nasal breathing was noted in 70% of cases.

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