

CAUSES BEHIND DISTAL OCCLUSION

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Article history:

Received 18 February 2019

Received in revised form 25 March 2019

Accepted 29 March 2019

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INTRODUCTION

The etiology and pathogenesis of distal occlusion have been the focus of a large number of works [1,2,3,4]. Most authors claim that the causes behind this pathology are very diverse [5,6,7,8]. It is also known that, various etiological factors lead to morphological and functional issues in the dentofacial system, including issues affecting the temporomandibular joint and masticatory muscles [9,10,11,12].

Aim of study

To identify the most significant factors contributing to and predisposing for distal occlusion. The object of this study included 156 patients with distal occlusion.

MATERIALS AND METHODS

Depending on the upper front teeth position, all the patients were divided into two groups. The first group included 82 patients with the upper front teeth protrusion, while the other group included 74 patients with the upper front teeth retrusion. The clinical histories and examination outcomes of all the patients allowed identifying factors contributing to the development of the said pathology.

RESULTS OF STUDY

In case of distal occlusion of the first clinical type, the most frequent causes included disturbed nasal breathing due to various pathological changes in the nasopharyngeal area — 73%. Such pathological processes imply narrowed airways, displaced or thickened nasal septum, tonsils hypertrophy, partial or complete

nose obstruction due to hypertrophic catarrh, polyps, adenoids. All of these lead to impeded nasal breathing, while the role nasal breathing issues play in the development of distal occlusion has been confirmed by many authors. Our research shows that distal factors contributing to the mandible displacement could be bad habits such as sucking thumb, lower lip, dummies etc. (63%). Besides, the occurrence of first clinical type distal occlusion has been linked to artificial feeding — 20%, childhood rickets — 20%, genetic predisposition — 16%, and premature removal of milk teeth — 14%.

The second clinical type of distal occlusion is due to a similar issue in the family — 63%; however, during that it is important to take into account the general body status as well as the effect of the environment. For instance, we identified chronic and acute maternal diseases during fetal development, gestoses, abnormal fetal position, higher pressure of the amniotic fluid during polyhydramnion, mismatch between the volume of the amnion and the fetus, amniotic cords, which lead to distal occlusion. The factors observed in case of the second clinical type included: poor habits — 40%, artificial feeding — 34%, premature removal of milk molars — 28%, disturbed nasal breathing and rickets — 23% each, respectively.

CONCLUSION

Distal occlusion typically develops as a result of a set of etiopathogenetic factors. For instance, when calculating the average number of factors contributing to the development of first clinical type of distal occlusion, there is an average of three factors as per each patient, and two — for one patient with the second clinical type of distal occlusion. The data from our study allows us to design a more detailed picture of the leading role that certain etiopathogenetic factors have in the development of distal occlusion, which enables us to opt for the most reasonable treatment method that should be comprehensive and take into account the diversity of etiological factors.

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