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# DIAGNOSTIC METHODS IN CHILDREN WITH FALSE MESIAL OCCLUSION

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## ABOUT ARTICLE

**Key words:** X-ray cephalometric, mesial occlusion.

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**Abstract:** In the last decade, mesial occlusion has been studied in many countries through the use of modern diagnostic technologies for the timely treatment of this anomaly. The basis for diagnosis is an X-ray cephalometric examination of the facial skeleton, which allows us to identify the leading pathogenetic mechanisms and conduct differential diagnosis of combined forms of anomaly, which cannot be carried out on the basis of clinical data alone (N.G.Abolmasov, 1982; E.N.Zhulev, 1986, etc.).

## INTRODUCTION

In the last decade, mesial occlusion has been studied in many countries through the use of modern diagnostic technologies for the timely treatment of this anomaly. The basis for diagnosis is an X-ray cephalometric examination of the facial skeleton, which allows us to identify the leading pathogenetic mechanisms and conduct differential diagnosis of combined forms of anomaly, which cannot be carried out on the basis of clinical data alone (N.G.Abolmasov, 1982; E.N.Zhulev, 1986, etc.).

According to WHO, anomalies of the maxillofacial region in the USA occur in 65% of cases, in European countries - 59.4%, in various regions of Russia they occur with a frequency of 30.9 to 76.5%, and in Uzbekistan they are observed in 62% of cases.

Much attention has been paid to the study of the issues of diagnosis and treatment planning for one of the most severe forms of dentition closure anomaly - mesial occlusion in the special literature (F.Ya.Khoroshilkina, 1976; H.A.Kalamkarov, 1981; N.G.Abolmasov, 1982; L.S.Persin, 1983; E.N. Zhulev, 1986; A.S.Shcherbakov, 1987; N. Friede, 1987; Yu.A.Gioeva, 1991; O.S.Balgurina, 1996 and others).

S.S. Murtazaev (2017) based on specialized cephalograms proved the peculiarity of the structure of the facial skeleton, spatial orientation, as well as the interjaw, maxillary and interdental relationships among representatives of the Uzbek population with normal bite and formed dentitions.

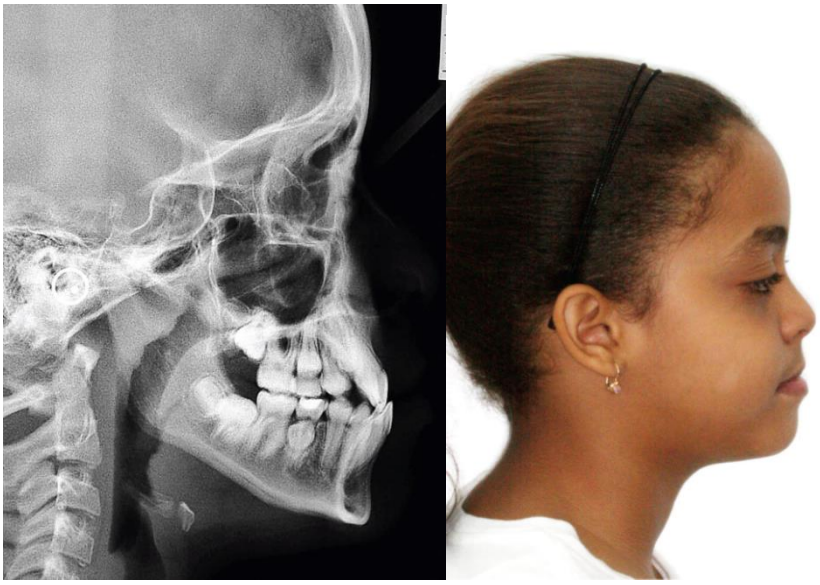
Objective: To evaluate modern diagnostic methods for the treatment of patients with mesial occlusion

**METHODS**

The study was conducted at the TSSI at the Department of Orthodontics for a year. 57 patients were examined, including 37 (62.7%) girls and 22 (37.2%) boys aged 6 to 12 years.

To study the mesial occlusion, we conducted a clinical examination of the oral cavity. For diagnostic analysis (OPTG, 3D X-ray, TRG ) were used

Fig.1. A 12–year-old patient - Photometry and TRG (1-2)



## RESULT

During the examination of patients with false progenia, a clinical examination of the oral cavity was performed. Based on these clinical studies, a TRG analysis was performed. According to the results of the analysis, it was determined that (ANB=2), (SN.GoGn = 40∘, FMA = 29∘) protrusion of the incisors of the lower jaw (IMPA = 99∘, 1.NB =35∘), retraction of the incisors of the lower jaw (1.NA = 18∘, 1-NA=1mm) and the protrusion of the lower lip (Ricketts E-line 3 mm)

The pathogenesis of pseudomesial occlusion is based on violations of the size and shape of the structures of the skeleton of the head, as well as violations of their mutual adaptation to each other. In the foreground in the structure of the facial skeleton are an increase in the height of the part of the face and the interdigital angle, a decrease in the depth of the face, shortening and distal displacement of the upper jaw. In the lower jaw, the leading pathogenetic sign is a tendency to its excessive development mesially.

## CONCLUSION

Cephalometric analysis of the structure of the facial skeleton in case of pseudomesial occlusion made it possible to clarify its main forms and their distribution. Mesial occlusion caused by macronathia of the mandible is most common (18.8%). A combination of micrognathia and retrognathia of the upper jaw is somewhat less common (16%). Prognathia of the mandible was detected by us in 13.8%. Macrognathia of the mandible in combination with retrognathia of the upper jaw was observed in 10% of the subjects.

Treatment planning for mesial occlusion should be based on anthropomechanical, X-ray studies, as they are the basis during the study of patients with sagittal anomaly, a differentiated approach to choosing the design of the device and a set of myohymnastic exercises depending on the features of the pathogenesis of the anomaly.

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