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Cranial deformities as a risk factor in the harmonious development of oral and maxillofacial region

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Abstract

Background: There is no information about cranio-facial asymmetry among school children and the influence of this pathology on the quality of life.

Material and methods: The study presents a descriptive analysis of 3923 children ages 7 to 18 years. In this scientific work were involved three types of schools: 421 children from schools with severe neurological disorders; 2157 children from auxiliary schools with special educational needs; and 1345 children from pre-university schools. Buccal examination included the dento-maxillary analysis in three planes (sagittal, vertical, and horizontal) and cranial anatomical shape was examined for all children.

Results: In total 3923 children were examined, of which 632 (16%) were determined with cranial asymmetry. Among 2157 children from auxiliary schools for children with special educational needs 18% were detected with cranial deformities. In schools for children with neurological disabilities cranial asymmetries were detected in 44.18%, and in pre-university schools 4.76 % were found with cranial deformities. A high incidence (twice more) of dental alveolar anomalies were found in children with cranial deformities, compared to those without deformities in the sagittal plane, 15.5% of children with cranial deformities were found with dento-alveolars anomalies and 7.84% in children without cranial deformation was ($P < 0.001$). Similar results were found in the determination of occlusion anomalies in the horizontal and vertical planes.

Conclusions: The high incidence of cranial deformities was found among handicapped children and children from schools with special educational needs. A few children with cranial deformities were found among children from pre-university schools. It was proved that a high risk of dento-alveolar anomalies have children with cranial deformities.

Key words: cranial deformities, malocclusion, plagiocephaly, craniosynostosis, handicapped children.