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MORPHOLOGICAL FEATURES OF THE CRANIAL REGION IN CHILDREN WITH SCOLIOSIS

Annotation: Among children and adolescents, diseases of the musculoskeletal system are dangerous because they lead to complex consequences. Scoliosis is a lateral curvature of the spine, which is dangerous for severe complications, especially for a growing child's body. In 80% of the number of people with this pathology, idiopathic scoliosis is diagnosed.

Key words: children, scoliosis, longitudinal diameter of the skull, morphofunctional state, head, vertical diameter of the skull.

In modern conditions, the study of morphometric parameters of growth, development and condition of the head and facial skeleton of a child can be a methodological basis for the development, improvement of anthropometric methods of diagnosis and reconstruction in medicine. With increasing age of the child, various changes of the head and the maxillary system, as well as the bite, occur, which are associated with the climatic and geographical features of the region of residence, the nature of nutrition and the change of milk teeth to permanent ones.

The purpose of the study is to study the anthropometric parameters of the head and face of children with scoliosis and compare these data with the parameters of healthy children.

Materials and methods. 140 children were examined, including 70 children with scoliosis (30 boys and 40 girls) and 70 healthy (30 boys and 40 girls). During the study, the methodology of studies of anthropometric indicators of the head and face of all children was used according to the methodology (methodological recommendations, 1998) by N.H.Shomirzayeva, S.A.Ten and I.Tukhtanazarova). Measurements were carried out using a centimeter tape and a special compass.

Results. As a result of the research, it was found that the head circumference in 10-year-old healthy girls ranged from 51.2 cm to 55.3 cm, on average 54.21 ± 0.17 cm, the longitudinal diameter of the skull from 15.1 cm to 17.4 cm on average 16.98 ± 0.13 cm, the transverse diameter of the skull from 13.4 cm to 17.2 cm, on average 14.67 ± 0.06 cm, the transverse size of the forehead from 15.1 cm to 17.4 cm, on average 16.18 ± 0.14 cm, the height or vertical diameter of the skull from 13.1 cm to 14.5 cm, on average 14.04 ± 0.09 cm.

Studies have shown that the head circumference in 10-year-old girls with scoliosis ranges from 51.2 cm to 55.3 cm, on average 53.21 ± 0.25 cm, the longitudinal diameter of the skull ranges from 15.1 cm to 17.4 cm, on average 16.17 ± 0.14 cm, the transverse diameter of the skull varied from 13.4 cm to 17.2 cm, on average, 14.24 ± 0.24 cm, the transverse size of the forehead from 10.2 cm to 12.2 cm, on average 11.63 ± 0.14 cm, the height or vertical diameter of the skull from 12.1 cm to 13.5 cm, on average 13.07 ± 0.09 .

The head circumference in 10-year-old healthy male children ranges from 52.3 cm to 55.3 cm, averaging 53.96 ± 0.19 cm. The longitudinal diameter of the skull ranged from 13.2 cm to 17.6 cm, on average was equal to 16.7 ± 1.30 cm, the transverse diameter of the skull from 11.6 cm to 14.0 cm, on average 12.78 ± 0.15 cm, the transverse size of the forehead from 8.5 cm to 15.8 cm, on average 11.98

± 0.45 cm, the height or vertical diameter of the skull from 10.1 cm to 14.0 cm, on average 11.80 ± 0.24 cm.

In the study of children with scoliosis, it was revealed that the head circumference in 10-year-old boys ranged from 53.2 cm to 54.1 cm, on average 53.82 ± 0.06 cm, the longitudinal diameter of the skull from 15.2 cm to 17.4 cm, on average 16.37 ± 0.14 cm, the transverse diameter of the skull from 13.2 cm to 16.2 cm, on average 11.49 ± 0.19 cm, the transverse size of the forehead from 10.6 cm to 12.6 cm, on average 11.8 ± 0.12 cm, the height or vertical diameter of the skull from 13.1 cm to 15.3 cm, on average 9.01 ± 0.14 cm.

The study revealed that in healthy girls of 10 years of age, the head circumference is 1.02 times, the longitudinal diameter is 1.05 times, the transverse diameter is 1.03 times, the transverse size of the forehead is 1.4 times, the height or vertical diameter of the skull is 1.07 times, the zygomatic diameter is 1.07 times, the mandibular diameter is 1.03 times, the morphological height the facial height is 1.5 times, the physiological height of the face is 1.15 times, the height of the nose is 1.33 times, the width of the nose is 1.41 times, the external orbital width is 1.10 times, the inter-orbital width is 1.30 times, the height of the mucous part of both lips is 1.04 times, the width of the mouth is 1.21 times more than in girls with scoliosis.

Conclusions. Thus, in children with scoliosis at the age of 10, the parameters of the craniofacial region are inversely proportional to the parameters of healthy children. This is due to the fact that the bone system of children at this age is in the development stage, and scoliosis has a detrimental effect on the growth and development of the child.

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