

FEATURES OF ANTHROPOMETRIC INDICATORS IN CHILDREN WITH SCOLIOSIS

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The relevance of the problem

Scoliosis is a common disease of the musculoskeletal system, which is characterized by a multi-plane deformity of the vertebral column and chest. Due to the pronounced deformation of the chest, its full excursion during breathing is difficult, which is accompanied by a violation of the functions of organs and systems of the body. While 20% of cases of scoliosis can be attributed to neuromuscular, syndromic or congenital disorders, up to 80% of all scolioses are called "idiopathic" or of unknown etiology. According to some authors, the leading causes of this disease are genetic predisposition and metabolic disorders in the body. There is no objective data that determines the possible development of scoliosis in the early stages. There is no consensus on the early diagnosis and prevention of possible consequences of scoliosis, which justifies the need for research in this area.

The aim of the study

The goal of the study was to study the anthropometric parameters of children aged 10 years with scoliosis and to compare them with the anthropometric indicators of healthy children.

Materials and research methods

The research was conducted at secondary school No. 2 and boarding school No. 23 in Bukhara for children with scoliosis. The results of examination of 40 children (20 boys and 20 girls) aged 10 with idiopathic scoliosis of thoracic localization of I and III degree according to Chaklin were studied. All examined children were divided into 2 groups by simple randomization, comparable in age, gender, and clinical and functional indicators. The main group consists of 40 children (20 boys and 20 girls) with scoliosis, and the control group consists of 40 healthy children (20 boys and 20 girls).

The method of anthropometric research of children was used for anthropometric measurements (guidelines of N. H. Shomirzaev, S. A. Ten and I. Tukhtanazarova, 1998).

Mathematical processing was performed directly from the General Excel 7.0 data matrix using the capabilities of the STTGRAPH 5.1 program, and the standard deviation and representativeness errors were determined.

The results of the study

All examined children showed clinical and radiological signs of scoliosis, the direction of the thoracic scoliotic arch was right-sided or left-sided. Studies have shown that the height of 10 year old healthy male children ranges from 131 cm to 147 cm, with an average of 138.0 ± 0.99 cm. The body weight ranged from 25 kg to 45 kg, with an average of 30.3 ± 1.24 kg.

In a study of children with scoliosis, it was found that the height of 10 year old boys ranged from 128 cm to 136 cm, with an average of 131.8 ± 1.05 cm. The average body weight is 30.0 ± 1.74 kg (from 24 kg to 52 kg).

The height of 10 year old healthy girls ranged from 136 cm to 155 cm, on average it was equal to 140.7 ± 1.18 cm. The average body weight is 35.4 ± 1.74 kg (from 28 kg to 56 kg).

Studies have shown that the height of 10 year old girls with scoliosis ranges from 118 cm to 139 cm, with an average of 123.0 ± 1.3 cm. The body weight varied from 22 kg to 29 kg, with an average of 25.4 ± 0.62 kg.

Discussion and Conclusion

Several risk factors have been identified by previous studies as affecting the progression of AIS. Age is commonly cited as a key indicator of progression. Younger patients at diagnosis carry a greater risk for progression due to the onset of puberty. In children with Idiopathic Scoliosis, gains in sitting height need to be compared with angular development of the.

Based on the data obtained, it was found that 10-year-old children with male and female scoliosis lag behind in height and body weight than their healthy peers. This is due to the fact that the bone system of children at this age is in the development stage, but with scoliotic disorders, the bone system is delayed in development in children.

The chest circumference in the pause, at the height of inspiration and at full exhalation in 10 year old boys and girls with scoliosis is less. X-ray and anthropometric studies have shown that in scoliosis in children of 10 years of age, due to pronounced curvature of the vertebral column, the chest is deformed, and this leads to the fact that its full excursion during breathing is reduced.