

Abstract

Scoliosis is defined as a pathological curvature of spinal cord of more than 10° in frontal plane which is combined with rotation of vertebral bodies and also with disruption of physiological curvatures in sagittal plane. Idiopathic scoliosis is the most frequent type of this diagnosis. The thesis deals with overall issue of this disease, theories of etiology, incidence, classification, types of examination, possibilities of new testing and therapy. The practical part describes rasterstereographic DIERS Formetric III 4D testing and comparison with RTG examination. The study was carried out with 17 girls and 1 boy with idiopathic scoliosis $11 - 46^\circ$ at the age of 11 - 17 years. Results of this testing were statistically analysed. Best results were found out in measurements by automatically set range for a group of patients with Cobb angle $\leq 25^\circ$ - for 95% differences the limits of correspondance were $\pm 4^\circ$, the average error was $0,3^\circ$. For group of all patients the limits of correspondance were $\pm 14^\circ$, the average error was $1,5^\circ$. The results confirmed, that with an increase of Cobb angle a bigger error and systematic error appears.