

Abstract

Scoliosis is the most common deformity of the spine affecting from 3 to 6% of human population. The thesis "Moiré and Pedoscan dynamic examinations of patients with scoliosis" summarizes the findings of kinesiology of the spine, pelvis and hip joints and ontogenesis of axial organ straightening. It also deals with the issue of idiopathic scoliosis, its incidence, etiology, classification, diagnosis, treatment options and applied physiotherapy methods. The paper emphasizes the influence of physiotherapy that forms an integral part of medical treatment. A great part of the thesis is devoted to the rasterstereographic and pedobarographic examination. The main purpose of this thesis was to detect and evaluate parameters assessing posture and movement of patients suffering from scoliosis and compare them with a control group. For this purpose, a pedobarographic system Diers pedoscan was used, which detected the distribution of compressive forces on the feet when walking and standing. It was also used a rasterstereographic system Diers formetric III 4D, which allowed for capturing photogrammetric recording of the spine and pelvis using a video-rasterstereography based on the Moiré topography. The study was carried out with a group of 22 females with idiopathic scoliosis up to 40° according to Cobb aged 10 – 18 years and a control group of 23 healthy females with equal age. The final figures were statistically analysed.