Postural variability of clinical parameters evaluating idiopathic scoliosis

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Abstract

Background. In the last 10-15 years many devices have been developed for objectively quantifying the source and size of potential errors in patients examined in standing position (orthostatic) posture. The aim of this work is to assess the variability of the parameters usually collected in orthostatic position due to errors in the measurement device. Methods. In a consecutive group of patients affected by adolescent idiopathic scoliosis, clinical parameters were evaluated using an optoelectronic device. The adoption of an optoelectronic measuring system (AUSCAN) allowed the replication of the clinical process for obtaining data in orthostatic position. The weight of the measuring system due to posture has been identified: postural adjustments (between 2.59 and 20.14 mm), positioning (between 4.38 and 22.95 mm). Conclusions. The findings of this study sustain variability in repeated clinical measures on the human being. These variations are inherent in any other measure collected in orthostatic posture.