The validity of clinical examination in adolescent spinal deformities.

Grosso C, Negrini S, Boniolo A, Negrini AA.

Fondazione Don Gnocchi, ONLUS, IRCCS, Milano; Centro Scoliosi Vigevano (Italy).

Abstract

STUDY DESIGN: retrospective study on the accuracy and reliability of two clinical tests for scoliosis in young patients.

AIM: to evaluate the inter-observer reliability of three non-invasive clinical measurements: hump height (HH), axial trunk rotation (ATR), and distance of the spinous process from the plumb line (DP) in standing; to compare these results with the corresponding radiographic measurements, the Cobb angles (CA). Population: 116 patients, 78 females and 38 males; 410 examinations have been performed (144 patients with brace and 266 without).

METHODS: a database was created using the measurements of different clinical parameters obtained from two examiners that measured them independently and in the same conditions. The Cobb method has been used as a gold standard.

RESULTS: our results show a very high inter-rater reliability for HH and ATR measurements. The DP shows a different inter-rater reliability for the thoracic (C7) and lumbar (L3) spine, in both cases lower than that in the frontal plane; the ICC of the thoracolumbar DP (D12) was very low. The correlation with the radiographic value was weak.

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