



Correlation Between Postural and Radiological Signs in the Assessment of Scoliosis in the Child and Adolescent

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Abstract. The present study was carried out based on the analysis of 99 medical records (MR) of patients of both genders, between 5 and 20 years of age, with a diagnosis of idiopathic scoliosis.

The aim was to study the degree of statistical correlation between the radiological method based on spine panoramic X-ray (spine pano) and the posturographic method (P), based on clinical photographs.

For these, 5 variables were defined, common to both methods. For the quantification of these 5 variables, each of them was translated into a new balance or alignment variable, as appropriate, defined by specific clinical indicators for the spine pano and for the clinical photographs, respectively. The value assigned to each variable was qualitative with three values: neutral and two values of deviation to neutrality, as appropriate. For each MR, a unit of analysis (UA) was defined, which summarizes the qualitative value obtained from the 5 common variables for the comparison of the two methodologies. The overall statistical analysis (Spearman's correlation coefficient and binomial test) was completed by analysing the percentages of coincidence of these ordered pairs.

The two methods are considered to capture different aspects of the phenomenon studied and they are neither equivalent nor interchangeable. It is therefore concluded that, in such cases of scoliosis, it is advisable to complement the radiological view (today considered the gold standard) with the view provided by clinical posturography in the standing position, in order to define therapeutic criteria for evolution and/or improvement.

Keywords: Scoliosis · Spine Panoramic X-Ray · Posture