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ORAL PRESENTATIONS

O4

Junctional Kyphosis, how can we detect and monitor it during growth?

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Introduction
Despite its importance in affecting adult pain, and disability, there is a lack of universal criteria for the diagnosis and evaluation of junctional kyphosis (JK) and a gold standard measurement and diagnostic system does not exist.
Aim
To verify the sensibility and specificity of clinical, and Formetric data in identifying junctional kyphosis in respect to the radiographical standard references.
Material and methods
Design: This is a cross sectional study from a prospective database started in March 2003.
Participants: 52 patients: 29 with JK, and 23 with thoracic hyperky-phosis (TK).
Inclusion criteria: patients affected by JK or TK at first visit with a complete clinical, radiographical and surface topography evaluation. Groups. JK: lower limit of kyphosis below T12. Control group: subjects with a thoracic kyphosis radiographic measure exceeding 50°Cobb.
Diagnostic tests used to detect JK:

Clinical: plumbline distances: T12 < S1.
Formetric criteria included the % of thoraco-lumbar inflexion point in trunk length over 60 %.

Statistics: sensitivity, specificity, positive (PPV) and negative predictive values (NPV), by using diagnostic test vs the actual gold standard were calculated using a 2x2 table.
Results
The sensititvity of the plumbline distances of T12 < S1, in detecting JK in respect to radiographic criteria, resulted 55 %, with an accuracy of 46 %. The specificity of the test was 65 %, PPV 67 % and NPV 33 %.
The sensitivity of the surface topography test resulted 73 %, as of the 29 patients with a JK x-rays diagnosis 22 showed a positive test, and only 7 without JK resulted negative. Therefore the specificity of the test was only 32 %. PPV and NPV resulted respectively of 40 % and 59 %.
Conclusion
The need for a useful criteria able to characterize JK to allow diagnosis and monitoring of the deformity is still lacking, and further studies will deepen this issue.