Bracing and exercises can effectively treat pain due to atypical Lumbar Scheuermann Disease
Bracing can improve lumbar vertebral body growth

Case series report of atypical lumbar Scheuermann's disease treated with braces and physiotherapeutic specific exercises

Background and objective

Reported prevalence of Scheuermann's Disease varies between 0.4% and 10%, while there are no studies about the prevalence of the Atypical Lumbar type. Lumbar Scheuermann can cause back pain, poor posture, and reduced flexibility. This study aims to retrospectively review all the patients with Lumbar Scheuermann Disease treated in our Institute to analyse their clinical characteristics, describe the treatments performed, related results and determinants in terms of pain and vertebral deformity.

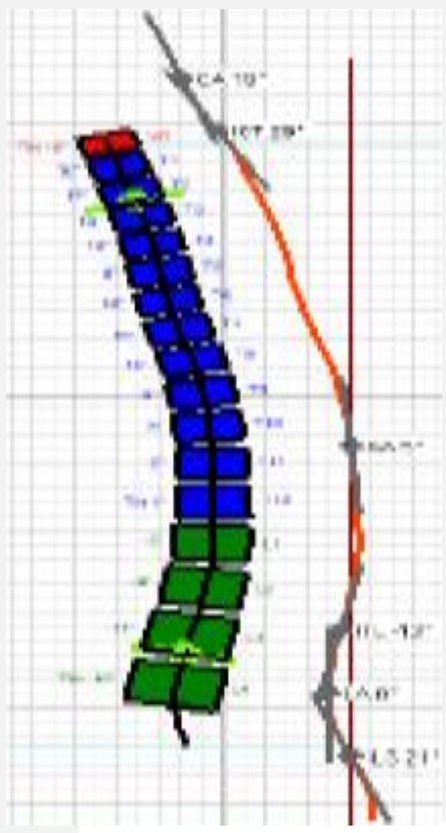
Results

Prevalence

- 11891 children in the database at the search date
- 435 with Scheuermann Disease: 3.6% of all sagittal issues, 56.3% males
- 47 with Lumbar Scheuermann: 10.8% of all Scheuermann Disease, 55.3% males.

Treatments

- 12 patients (7 males, age at start 13±2) had 30±25 months of treatment: 7 exercises, 5 bracing.
- The others: 6 incomplete radiographs, 5 still in treatment, 16 never treated (second opinion), 8 dropouts.



Pain

- At start: 50% since 7.2±2.7 months (SRS-22 pain scale 3.2±0.5, function scale 3.9±0.4).
- At six months resolution in 50%
- At 12 months 100%
- Recurrences: none in bracing, 3 in exercises.

Deformity

- At start, braced 3 with 7.4° wedging, exercises 2 with 7.7°.
- Wedging angle reduced 3° (range 3-10°) in braced, progressed 1.6° (8-12°) in the exercises group.

Methods

We searched our electronic clinical charts and included all children under age 18 with a diagnosis of Scheuermann Disease.

Treatments groups

- specific stabilization exercises only
- full-time (20 to 23 hours/day) Lapadula monovalve lordosing brace in combination with stabilization exercises

Outcomes

- kyphosis and lordosis Cobb angle
- Number of wedged vertebrae
- Vertebral wedging angle
- SRS-22 questionnaire (with pain subscale)

End of treatment

- physician's prescription due no estimated further risk of progression
- achievement of European Risser 3 sign (US Risser 4)

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