

Oral presentation

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## Wedge vertebrae normalization in congenital scoliosis due to application of external forces by brace

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### Objective

It is well documented that congenital scoliosis patients suffering defects of segmentation, like unilateral unsegmented bars, need early surgical treatment, as the deformity will malignantly progress [1]. Other similar cases having defects of formation such as hemivertebrae (non-incarcerated, semincarcerated, or incarcerated) receive a variety of treatments ranging from observation to brace treatment or surgical intervention [2]. The aim is to highlight the fact that, in selected congenital scoliosis patients, the smaller side of blocks and wedged vertebrae can be expanded due to brace treatment.

### Study design

Presentation of the long-term follow-up of two congenital scoliotics with blocks and hemivertebrae, conservatively treated.

### Materials and methods

The first patient is a boy (born on 30 October 1985). He was eleven years of age when he initially attended the scoliosis clinic with a L3 incarcerated hemivertebra, with a Cobb angle L2–L4 of 21 degrees. Due to surface deformity and anticipation of a possible progression of the scoliotic curve, conservative treatment with a modified Boston Brace was commenced, with regular clinical and radiographic followup. The second patient is a girl (born on 30 September 1985). She was six years of age when she ini-

tially with an abnormal block, a congenital wedge vertebra Th5–6 and 23° of Cobb angle. She received a nearly typical Chêneau brace.

### Results

Long-term follow-up revealed that wedged vertebrae were sufficiently normalized in both patients, that no further treatment was needed.

### Conclusion

Wedge deformed vertebrae can be straightened by brace. Other types of vertebral deformations, including idiopathic scoliosis and Scheuermann's disease often show wedge deformed vertebrae and can also be straightened by brace, although this fact seems to be generally not acknowledged.

### References

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