

ORAL PRESENTATION

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# Joint hypermobility syndrome in children with idiopathic scoliosis

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## Purpose of study

To assess the frequency of occurrence of the hypermobility syndrome (HS) in children and teenagers with idiopathic scoliosis (IS). To assess the presence of HS in relation to the angle of curvature, vertebral rotation, length of scoliosis and the treatment used.

## Background

Joint hypermobility syndrome is diagnosed when the mobility of small and large joints is increased in relation to standard mobility for any given age, gender and race, and after excluding systemic diseases [1][2][3]. It is assessed by clinical examination using specific scales (Beighton) [4]. Some methods of physiotherapy used to treat scoliotic children, include exercises that aim at increasing the range of spinal mobility to achieve curve correction [5][6][7][8][9].

## Materials and methods

128 children (92 girls and 36 boys) aged 9 to 18 years, comprising 70 IS children (34 single and 36 double IS), Cobb angle from 11 to 53 degrees, and 58 scoliosis-free controls were examined. Beighton scale as well as Hakim and Grahame questionnaire were used to disclose the presence of HS [1][4][9].

## Results

HS was noted more often in children with scoliosis than in the control group ( $p < 0.0001$ ). The angle of curvature, the apical vertebra rotation, the number of vertebrae of the primary curve and the treatment (brace or physiotherapy) did not influence the frequency of occurrence of HS. In single curve IS, the HS appeared more often than in double curve IS ( $p = 0.03$ ).

## Conclusions

HS appears more often in children with IS than in healthy controls, especially in single curves. There was no relation of HS with the angle, rotation, length of scoliosis or treatment type. HS should be taken into account when physiotherapy is planned in IS children.

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