E-Poster

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Spinal Deformity Associated With Dural Ectasia in Individuals With Marfan Syndrome: A Cross-Sectional Comparative Study (MARFANEOS)

Topic: Health Conditions (Nervous System, Musculoskeletal System, Cardiopulmonary System)

Christelle Nguyen[1], Benjamin Chevalier[1], François Rannou[2], Pierre Delzongle[2]

[1]*AP-HP, Paris, France*
[2]*Université Paris Cité, Paris, France*

BACKGROUND

Marfan syndrome is a rare genetic disorder. Phenotypes are heterogeneous. Dural ectasia often occurs in individuals with Marfan syndrome and is the second most frequent manifestation after aortic root involvement. We aimed to compare spinal parameters obtained on an full spine x-ray in standing position using the EOS® system, between individuals with Marfan syndrome with and without dural ectasia.

METHODS

We conducted a cross-sectional comparative study individuals with Marfan syndrome with and without dural ectasia. All individuals with Marfan syndrome followed in a single centre were screened. The presence of dural ectasia was assessed using CT-scan or magnetic resonance imaging. Endpoints were: 1/ mean pelvic parameters (pelvic tilt, pelvic incidence and sacral slope), 2, frequencies of Sponseller and Roussouly classification types, of scoliosis (thoracic, thoraco-lumbar and lumbar) and of sagittal (SVA ≥ 40 mm) and coronal (C7-CSL ≥ 20 mm) global imbalance.

RESULTS

Overall, 31 individuals were included: 19 (61%) had dural ectasia and 12 (39%) had not. Mean age was 45 (11) years, 17 (55%) were women and 2 (13%) had a history of back surgery. Types IC (thoracic kyphosis ≥ 50°) and IIB (inversed sagittal curves with lumbar kyphosis) of Sponseller classification were more frequent in individuals without dural ectasia that in those without (4 [33%] vs. 1 [6%], $p = 0.04$ and 3 [25%] vs. 0 [0%], $p = 0.02$, respectively). We found no differences between the two groups for the other outcomes assessed.

CONCLUSION

Individuals with Marfan syndrome without dural ectasia, as compared to individuals with Marfan syndrome with dural ectasia, more often display types IC (thoracic kyphosis ≥ 50°) and IIB (inversed sagittal curves) of Sponseller classification.

Statement of Disclosures

None

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Corresponding Author:
Christelle Nguyen
AP-HP, Paris, France
Email: christelle.nguyen2@aphp.fr