

The Journal of the American Osteopathic Association



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Progressive Infantile Scoliosis Managed With Osteopathic Manipulative Treatment

To the Editor:

The September 2017 edition of *The Journal of the American Osteopathic Association* featured an interesting article by Feely and Kapraun.¹ This article describes the application of osteopathic manipulative treatment (OMT) in a case of infantile idiopathic scoliosis (IIS), attributing the successful outcome to OMT. Despite the reported anecdotal evidence, it remains unclear whether OMT directly facilitated this observed improvement.

Our initial concern with this article regards the measurement shown in Figure 1. The generated lines in this radiograph and the accompanying caption indicate a Cobb angle of 52°. The text, which makes no mention of a Cobb angle, reports this measurement as the *rib vertical angle difference*. Furthermore, the authors use this term when referring to the patient's "scoliotic curve" instead of reporting the Cobb angle, which is more commonly used in this regard.

Additionally, this article reports that improvement directly coincided with the onset of OMT in support of the authors' final conclusion. In fact, the curvature was reported to improve nearly 50% (52°-23°) while the patient was still in her second cast. This improvement describes the more typical resolution of left thoracolumbar curvature extensively described in orthopedic literature. More specifically, Wynne-Davies² followed IIS occurrences in the Edinburgh Scoliosis Clinic and reported spontaneous resolution in the majority of cases (64%). Similarly, Lloyd-Roberts and Pilcher³ found a 90% resolution of scoliosis in their series of US infants. Both studies included more than 100 patients and also noted nearly 100% association with plagiocephaly (which resolved within 6 years of age without manipulation). Thus, it may be the case that OMT aided correction or accelerated improvement in conjunction with casting, but the effect of OMT alone in cases of IIS remains unclear.

Rejecting the null hypothesis of an association with manipulation is hard to prove in any case report—especially when considering the favorable results

described in cases with conventional management alone. Regardless, the continuing reversal of scoliosis observed after 11 months of OMT without Risser casting is a compelling result. Whether OMT can directly facilitate correction of the spine and whether cranial pathology is the primary driver of spinal deformity in IIS is a valuable frontier of research. Consequently, more study regarding OMT and its effectiveness in addressing IIS is clearly warranted. (doi:10.7556/jaoa.2018.096)

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References

1. Feely RA, Kapraun HE. Progressive infantile scoliosis managed with osteopathic manipulative treatment. *J Am Osteopath Assoc*. 2017;117(9):595-599. doi:10.7556/jaoa.2017.114
2. Wynne-Davies R. Infantile idiopathic scoliosis: causative factors, particularly in the first six months of life. *J Bone Joint Surg Br*. 1975;57(2):138-141.
3. Lloyd-Roberts GC, Pilcher MF. Structural idiopathic scoliosis in infancy: a study of the natural history of 100 patients. *J Bone Joint Surg Br*. 1965;47:520-523.

Response

In our September 2017 case report,¹ we described a patient with progressive infantile idiopathic scoliosis (IIS) managed with osteopathic manipulative treatment. The possibility of spontaneous resolution of the patient's scoliosis curve was explained and accepted as the null hypothesis. Yes, the majority of IIS cases resolve spontaneously,^{2,3} and the majority of IIS cases are nonprogressive.⁴ As specified, the patient in the case report

had progressive IIS, which made spontaneous resolution less likely.

We agree that the angles should have been labeled using the Cobb angle and not rib vertical angle difference. At the time the literature search was performed for this article, the Scoliosis Research Society used rib vertical angle difference, which is why it is mentioned as a common unit of reporting. Osteopathic physicians and surgeons indeed more commonly use the Cobb angle, and it

would have been helpful if these data had also been included. (doi:10.7556/jaoa.2018.097)

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References

1. Feely RA, Kapraun HE. Progressive infantile scoliosis managed with osteopathic manipulative

treatment. *J Am Osteopath Assoc*. 2017;117(9):595-599. doi:10.7556/jaoa.2017.114

2. Infantile scoliosis. Scoliosis Research Society website. <http://www.srs.org/professionals/online-education-and-resources/conditions-and-treatments/infantile-scoliosis>. Accessed March 7, 2017.
3. Wynne-Davies R. Infantile idiopathic scoliosis: causative factors, particularly in the first six months of life. *J Bone Joint Surg Br*. 1975;57(2):138-141.
4. Sankar WN, Skaggs DL. Pediatric orthopaedics: pediatric spine. In: Wiesel B, Sankar WN, Delahay JN, Wiesel SW, eds. *Orthopaedic Surgery: Principles of Diagnosis and Treatment*. Philadelphia, PA: Lippincott Williams & Wilkins; 2011.

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