Editorial

Corresponding Author

Kenneth Cheung

<https://orcid.org/0000-0001-8304-0419>

Department of Orthopaedics and
Traumatology, The University of Hong
Kong, Queen Mary Hospital, 102
Pokfulam Road, Hong Kong, SAR, China
Email: cheungmc@hku.hk

See the article “The Effect of Brace
Treatment on Large Curves of 40° to 55° in
Adolescents With Idiopathic Scoliosis
Who Have Avoided Surgery: A
Retrospective Cohort Study” via <https://doi.org/10.14245/ns.2040654.327>.

This is an Open Access article distributed under the terms of the Creative Commons Attribution Non-Commercial License (<https://creativecommons.org/licenses/by-nc/4.0/>) which permits unrestricted non-commercial use, distribution, and reproduction in any medium, provided the original work is properly cited.

Copyright © 2021 by the Korean Spinal
Neurosurgery Society

Is There a Role for Conservative Treatment for Large Curvatures in Patients With Adolescent Idiopathic Scoliosis?: Commentary on “The Effect of Brace Treatment on Large Curves of 40° to 55° in Adolescents With Idiopathic Scoliosis Who Have Avoided Surgery: A Retrospective Cohort Study”

Kenneth Cheung

Department of Orthopaedics and Traumatology, The University of Hong Kong, Hong Kong, China

Adolescent idiopathic scoliosis (AIS) is a condition that has been treated by spine surgeons around the world for many years. With a good understanding of the natural history and modern day successes in anaesthesia, neuromonitoring, and instrumentation, most surgeons would recommend surgeries for curves of over 45° to 50°. However, a gap exists for those curves that are over 40° that have not quite reached the indications for surgery and also for those who are not willing to accept surgical treatment.

The article by Razeghinezhad et al.¹ on “The Effect of Brace Treatment on Large Curves of 40° to 55° in Adolescents With Idiopathic Scoliosis Who Have Avoided Surgery: A Retrospective Cohort Study” is a timely reminder that other options are available. This is quite a sizable study with 60 subjects, all of which were skeletally immature as indicated by a Risser sign of 0 to 2, and all were uniformly treated using one type of brace.

They showed in this study that some patients may still benefit from bracing and that the indicators of response to brace treatment include older chronologic age at brace initiation, a longer duration of brace wear, smaller Cobb angle at presentation, and higher in-brace correction (indicating more flexible curves). They were able to show that 43% of their subjects either did not progress or even had some improvement. Their results are in line with other studies of a similar nature.

A weakness in this study was that daily brace wear duration was quantified based on patient self-report, as this is recognised not to be accurate. Another issue is the use of Risser sign as a maturity indicator. While this is commonly quoted, most spine surgeons are aware of the deficiencies of the Risser sign, as there could be inconsistencies between the left and

right iliac crest, and also the location of first appearance of the iliac wing apophysis along the iliac crest, making grading difficult. Indeed, this may explain why the authors found chronological age to be marginally correlated with nonprogression, since these subjects may be more skeletally mature than the Risser sign may suggest.

While it was consistent that Milwaukee braces were used for all patients, in my institution, we have tended to treat most AIS with thoracolumbosacral orthoses (TLSO or Boston type braces) which can be easily worn underneath clothing and therefore cosmetically more acceptable. Milwaukee brace is reserved for those with high thoracic curves whose apex is above T7. Even then, our own experience is that compliance with Milwaukee braces is considerably worse than TLSO.

Overall, the authors should be commended with carrying out this study and is a timely reminder of the importance of good brace treatment.

CONFLICT OF INTEREST

The author has nothing to disclose.

REFERENCE

1. Razeghinezhad R, Kamyab M, Babae T, et al. The effect of brace treatment on large curves of 40° to 55° in adolescents with idiopathic scoliosis who have avoided surgery: a retrospective cohort study. *Neurospine* 2021;18:437-44.

Title: Les Femmes d'Alger (O Version O)
 Artist: Pablo Picasso
 Year: 1907
 © 2021 - Succession Pablo Picasso - SACK (Korea)