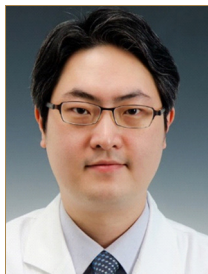




Editorial



Commentary on “Emerging Technologies in the Treatment of Adult Spinal Deformity”

Seung-Jae Hyun

Department of Neurosurgery, Spine Center, Seoul National University Bundang Hospital, Seoul National University College of Medicine, Seongnam, Korea

Corresponding Author

Seung-Jae Hyun

<https://orcid.org/0000-0003-2937-5300>

Department of Neurosurgery, Spine Center, Seoul National University Bundang Hospital, Seoul National University College of Medicine, 82 Gumi-ro 173beon-gil, Bundang-gu, Seongnam 13620, Korea
Email: hyunsj@snu.ac.kr

See the article “Emerging Technologies in the Treatment of Adult Spinal Deformity” via <https://doi.org/10.14245/ns.2142412.206>.

I read the article titled “Emerging Technologies in the Treatment of Adult Spinal Deformity”¹ with great interest, as these technologies such as machine learning (ML) and robot are popular icons of the era. Dr. Patel and colleagues thoroughly assessed the current status of ML, patient-specific rods (PSRs), and robot-guided spine surgery (RGSS) in adult spinal deformity (ASD), and discuss its future applications in spine surgery. Through meticulous review of the literatures, the authors suggested the future integration of ML with robotics and PSRs to further improve patient care in ASD correction. I do agree with their suggestion in some particular ASD cases. However, surgical- and radiographic outcomes following ASD correction surgery are associated with so many factors. Furthermore, the optimal value for ML can be variable in ASD surgery. Unfortunately, it’s hard to say “perfect” value to predict excellent surgical- and clinical outcome in most ASD correction surgery, there is a gray zone between “perfect” and “poor.” For example, the optimal target lumbar lordosis can be frequently changed by theories or classifications such as Scoliosis Research Society-Schwab, Roussouly type, global alignment and proportion score, age-matched adjustment, etc. A bunch of studies have reported too many risk factors related with poor clinical- and radiographic outcomes following ASD correction surgery.²⁻⁴ Even tricky thing is that results of the affecting factors vary on each study. I feel sometimes ASD seems to be an unwinnable castle. Nevertheless, I hope these emerging technologies will continue to improve pre-operative planning, reduce complication rates and patient satisfaction with surgical intervention for ASD. Besides the ML, PSR, and RGSS, other emerging techniques such as artificial intelligence, virtual/augmented reality seem to be quite promising.^{5,6} Lastly, I’d like to appreciate the authors’ contribution to body of the literatures for overcoming ASD.



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CONFLICT OF INTEREST

The author has nothing to disclose.

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Title: The Old Guitarist
Artist: Pablo Picasso
Year: 1903
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