The active self-correction component of scoliosis-specific exercises has results in the long-term, while the stabilization component is sufficient in the short term

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We would like to thank Yagci and Yakut for the interesting paper (1) published in a field requiring extensive research (2). We would like to propose some comments about the intrinsic significance of this study. According to the SOSORT/SRS criteria (2), these results should be classified as a very short-term assessment (less than 12 months of treatment). The question is: what can we expect from exercises as an add-on to bracing in the very short term? Which component of the exercise program could lead to possible improvements in results? The two groups compared by Yagci and Yakult (1) included SEAS and core-stabilization. According to the SOSORT expert consensus (2), scoliosis-specific exercise schools like SEAS include two main components: active self-correction (ASC) and stabilization. Consequently, a common intervention was provided to the two groups (stabilization) in this study, while the SEAS group also received ASC. Experts agree that stabilization is more important during the first treatment phase (when the brace still maintains spine alignment), and ASC is more important in maintaining the obtained results during the brace weaning phase (when the patients have to live sustaining in correction their spine without brace support) (3). The paper by Yagci and Yakut provides support to our assumption that stabilization is sufficient for the very short-term results of brace treatment.

The paper also raises some methodological questions. The patients were more adherent to the brace than to the exercise therapy. Unfortunately, the authors did not mention the prescribed number of bracing hours and if there was a difference in the adherence to bracing between the groups: this variable is expected to impact the results more than the type of exercises. A compliance monitor is nowadays almost mandatory in bracing studies (2). In addition, a comparison between the two groups is critical. For example, were the braces used for same amount of hours in the two groups? It is not possible to analyze the obtained results without this data. Finally, in the methods section it is written: *"Assessments were undertaken at baseline and after the 4-month treatment period for each patient by the second investigator, who was blind to the allocation of the participants, throughout the study. Final measurements were taken after the brace has been removed for 6 h"*.(1) whereas in the results "*Initial mean in-brace correction for the primary curve".* (1) Were the x-rays for the comparison measured in the brace or out of the brace? This methodology could significantly change the reported results.

In conclusion, provided that the methodological questions are addressed, we thank Yagci and Yakut to have confirmed an assumption diffused, but not proven, among experts in the field: stabilization is the most important component of scoliosis-specific exercises in the first phase of bracing treatment. In light of the results demonstrating that ASC and stabilization help during brace weaning (3), it is important for the future to determine when to start ASC: immediately (even if it could add nothing to stabilization) or when weaning starts (when it could be too late)?

References

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