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AUTHOR'S REPLY

Reply to the Letter to the Editor of Fei Jia et al. concerning "Comparison of combined anterior–posterior approach versus posterior-only approach in neuromuscular scoliosis: a systematic review and meta-analysis" by Shao ZX, et al. [Eur Spine J; (2018) 27(9): 2213–2222]

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Above all, we would like to thank for the interest in our article entitled "Comparison of combined anterior–posterior approach versus posterior-only approach in neuromuscular scoliosis: a systematic review and meta-analysis" [1]. We are very grateful for the kind comments and the opportunity to respond to the Letter to the Editor. Our responses are as follows:

Even though the Newcastle–Ottawa scale (NOS) is the best for cohort and case–control study, it is not best method to non-randomized interventional study [2, 3]. Meanwhile, the methodological index for non-randomized studies (MINORS) is designed for non-randomized study and takes full account of the features of non-randomized study [4]. Therefore, we choose MINORS as our quality assessing tool. And thanks to the careful check, we find there are some errors in assessment by MINORS, which is shown in Table 1. In fact, the scores of studies are still acceptable, though it is not most ideal.

As for funnel plots, we thought showing funnel plots were better, even though the number of included studies was less than 10. And this is the reason that we put the figures of funnel plots into supplements, not manuscript.

As for loss of Cobb angle, we did not conduct subgroup analysis thanks to low I^2, and the number is too low to establish a new subgroup. Taking the comment into account, we discover there is a difference, between *Teli 2006* and *Keeler 2010*, *Moon 2011*, that autologous bone graft in both anterior and posterior surgery in *Teli 2006*. This difference may be an influence factor, for which we will further track. Besides, the sentence "there was a significant difference in the significant difference group (MD, 6.4; 95% CI − 0.19 to 13.0) without significant heterogeneity" should change to "there was a significant difference in the no significant difference group (MD, 6.4; 95% CI − 0.19 to 13.0) without significant heterogeneity", and we are sincerely sorry for this error.

As for duration of operation, blood loss and duration of hospital stay, the heterogeneities may be derived from *Swank 1989* and *Beckmann 2016*, which used anterior spinal fusion, not anterior spinal release. As shown in Figs. 1, 2 and 3, there were significant differences, in subgroup *anterior spinal release*, in duration of operation (MD, − 208.21; 95% CI − 228.62 to − 187.80), blood loss (MD, − 0.37; 95% CI − 0.62 to − 0.12) and duration of hospital stay (MD, − 2.00; 95% CI − 3.79 to − 0.21) with low heterogeneity. Meanwhile, there were obvious differences in subgroup *anterior spinal fusion*. That is, there is no change in conclusion in fact and POA had advantages in less operative time and blood loss, shorter hospital.

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Table 1 Quality assessment according to the MINORS

	A	B	C	D	E	F	G	H	I	J	K	L	Total[a]
Auerbach 2009	2	2	0	1	1	2	0	0	2	2	2	2	16
Tsirikos 2008	2	2	2	2	1	2	1	0	2	2	2	2	20
Teli 2006	2	2	0	2	1	2	0	0	2	2	2	2	17
Swank 1989	2	2	2	1	1	2	1	0	2	2	2	2	19
Moon 2011	2	2	0	1	1	2	0	0	2	2	2	2	16
Keeler 2010	2	2	0	1	1	2	0	0	2	2	2	2	16
Beckmann 2016	2	2	0	2	1	2	0	0	2	2	2	2	17

A, A clearly stated aim; B, inclusion of consecutive patients; C, prospective collection of data; D, end-points appropriate to the aim of the study; E, unbiased assessment of the study end point; F, follow-up period appropriate to the aim of the study; G, loss to follow-up less than 5%; H, prospective calculation of the study size; I, an adequate control group; J, contemporary groups; K, baseline equivalence of groups; L, adequate statistical analyses

[a]The items are scored 0 (not reported), 1 (reported but inadequate) or 2 (reported and adequate)

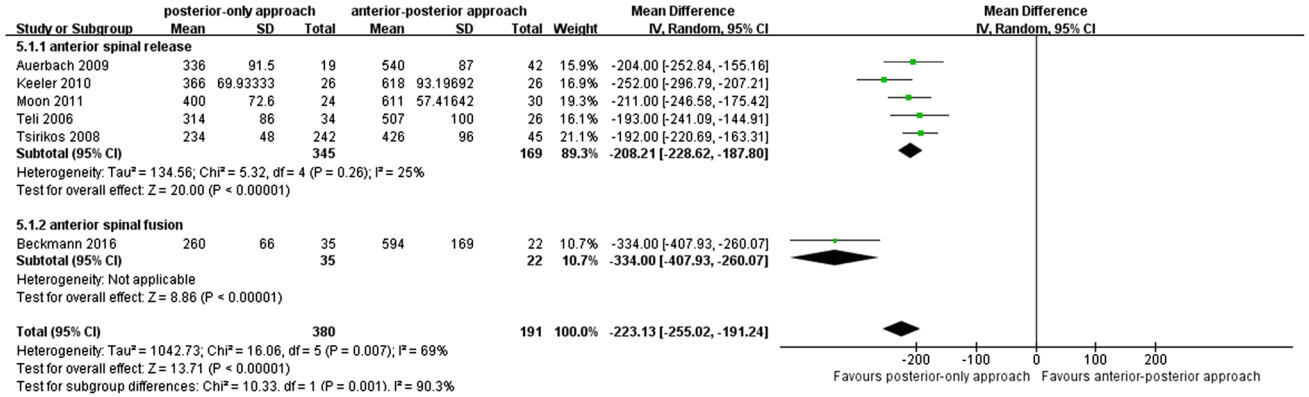

Fig. 1 Forest plots of duration of operation. In subgroup anterior spinal release, there was a significant difference between two groups (MD, − 208.21; 95% CI − 228.62 to − 187.80) with low heterogeneity; and in subgroup anterior spinal fusion, there was an obvious difference

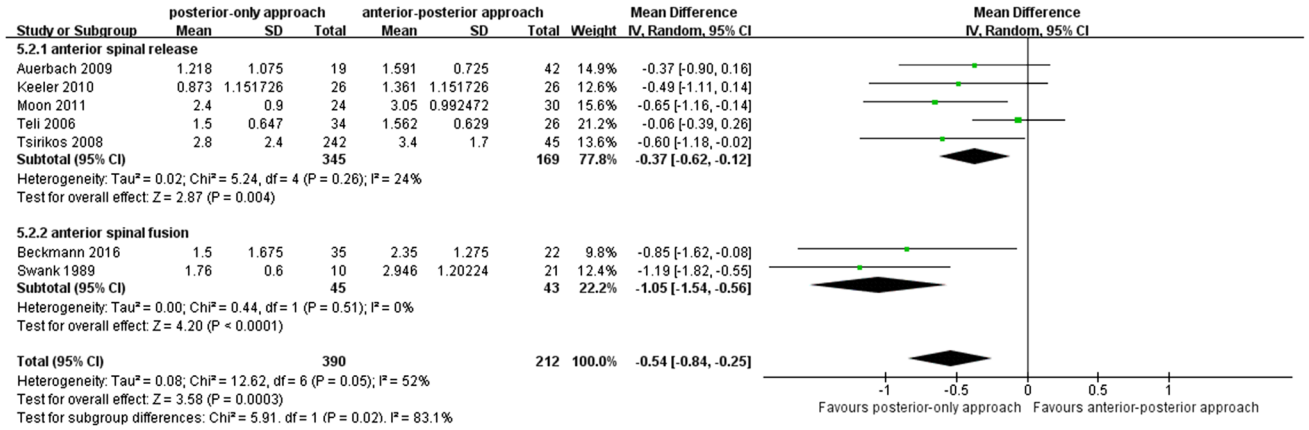

Fig. 2 Forest plots of blood loss. In subgroup anterior spinal release, there was a significant difference between two groups (MD, − 0.37; 95% CI − 0.62 to − 0.12) with low heterogeneity; and in subgroup anterior spinal fusion, there was a significant difference (MD, − 1.05; 95% CI − 1.54 to − 0.56)

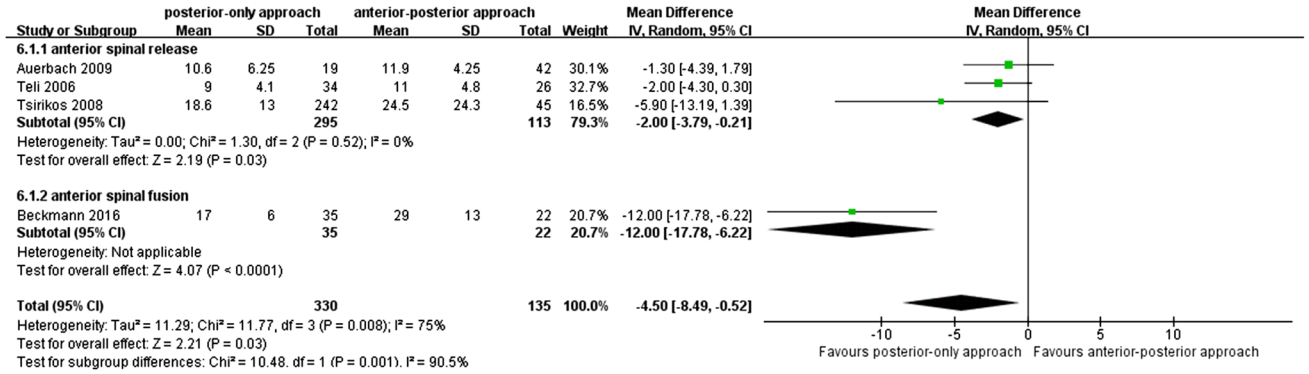

Fig. 3 Forest plots of duration of hospital stay. In subgroup anterior spinal release, there was a significant difference between two groups (MD, −2.00; 95% CI −3.79 to −0.21) with low heterogeneity; and in subgroup anterior spinal fusion, there was an obvious difference

Compliance with ethical standards

Conflict of interest All authors declare that they have no conflict of interest.

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