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AUTHOR'S REPLY

Reply to the Letter to the Editor of L. Liang et al. concerning "Is MIS-TLIF superior to open TLIF in obese patients?: A systematic review and meta-analysis" by Tan JH et al. (Eur Spine J, 2018; doi: 10.1007/s00586-018-5630-0)

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Dear Editor,

We sincerely thank the reader for their interest in our paper titled: Is MIS-TLIF superior to open TLIF in obese patients?: A systematic review and meta-analysis.

During our literature search for related articles on MIS and obesity, we also hand-searched the reference lists in all articles as well, in order to ensure all related articles were not missed. In a review of systematic reviews and meta-analyses performed in the past two decades, Lam et al. reported that in 2014, the mean and median number of bibliographic databases searched in published meta-analyses were 3.34 and 4 in 2014, respectively [1]. In this study, we utilized four databases—PubMed, Web of Science, Scopus and Cochrane Central Register of Controlled Trials. However, we do acknowledge that we should have included large databases such as Embase as well. Hence, we have done a search on Embase as well and found no other articles that were potentially missed.

The reader pointed several other keywords as well. We hence did a fresh search of the aforementioned databases with the following keywords: TLIF, transforaminal lumbar interbody fusion, instrumentation, fusion, obesity, obese and overweight, fat, adiposity, BMI, body mass index. No new articles were found that matched our pre-defined inclusion criteria. Nevertheless, we thank the reader for his/her suggestion and will take note in future.

The funnel plots are attached in this reply. However, due to the low number of included studies in this meta-analysis, it may not be accurate, as the reader pointed out as well. This is due to the low number of the available literature that has been published in this topic of TLIF surgeries in the comparison of obese and non-obese patients.

The reader also comments on the significant heterogeneities in the comparison of back pain pre- and post-operatively ($I^2 = 89\%$), and in the comparison of ODI pre- and post-operatively ($I^2 = 96\%$). We acknowledge the large heterogeneity in these two analyses, and as previously described in the methodology section, when the I^2 was $\geq 50\%$, the assumption of homogeneity was rejected and a random-effects model was adopted, which was the case for the two analyses for back pain and ODI comparison.

We do thank the reader's comments regarding using the GRADE approach, and registration of the study protocol, and will keep it in mind for future meta-analyses. Regarding intra-operative blood loss, Adogwa et al. did not report intra-operative blood loss in their study. Hence, they had no values and did not affect the pooled analysis and forest plot in the present study.

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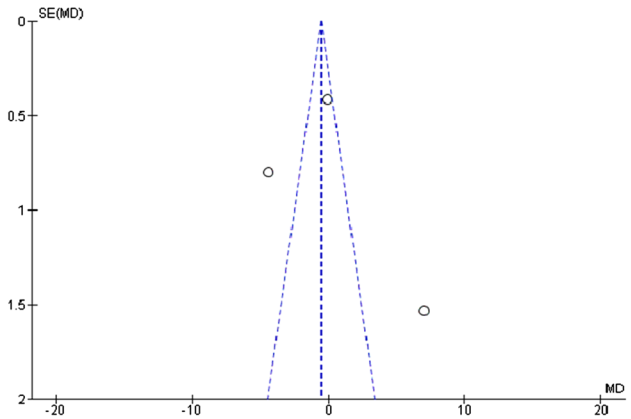
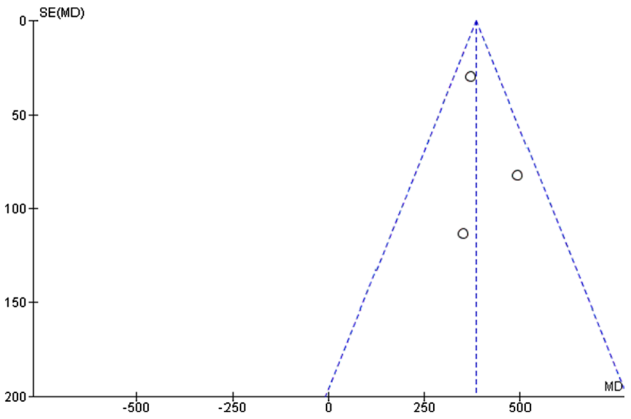
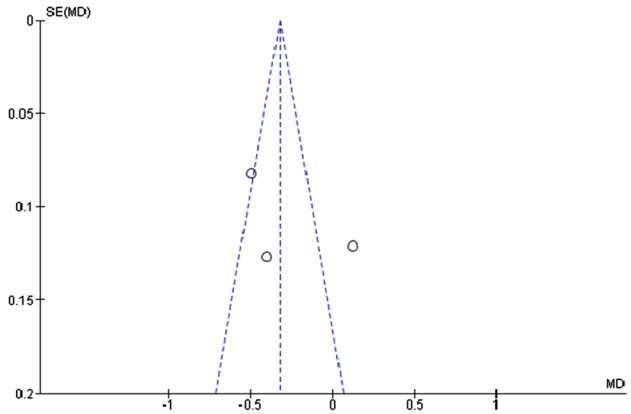


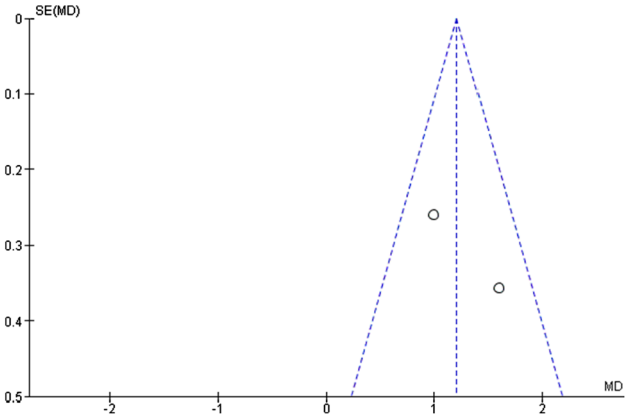
Funnel plot ODI



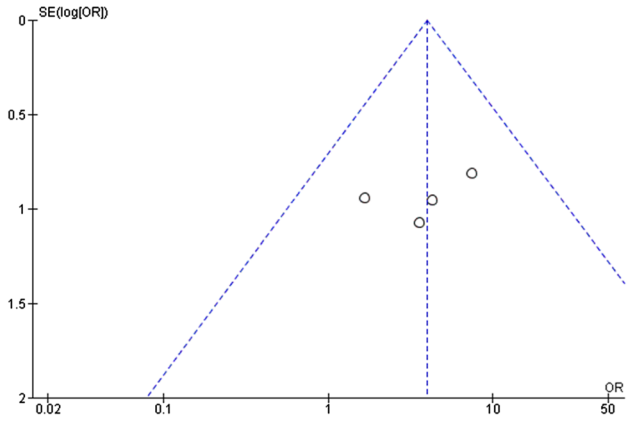
Funnel plot blood loss



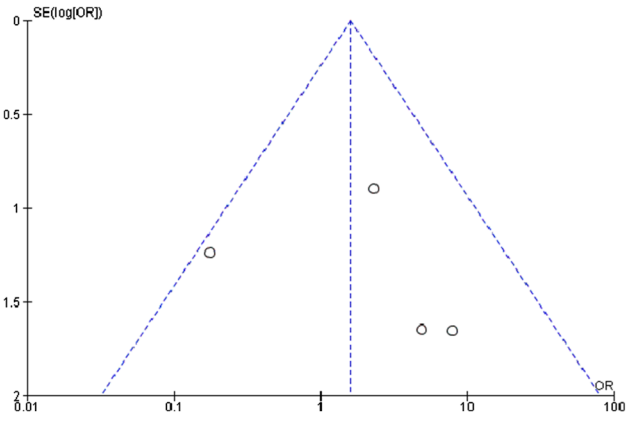
Funnel plot VAS



Funnel plot hospitalization stay



Funnel plot Dural tear



Funnel plot wound infection

Compliance with ethical standards

Conflict of interest The authors declare that there is no conflict of interest.

Reference

1. Lam MT, McDiarmid M (2016) Increasing number of databases searched in systematic reviews and meta-analyses between 1994 and 2014. J Med Libr Assoc 104:284–289