

Reviewer's comment concerning "Anterior cervical discectomy versus corpectomy for multilevel cervical spondylotic myelopathy: a meta-analysis" (ESJO-D-14-00408R2 by Shan-Wen Xiao, Hua Jiang, Li-Jing Yang and Zeng-Ming Xiao)

Francis H. Shen

Published online: 7 October 2014
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In this study, the authors have undertaken a meta-analysis to compare the results between anterior cervical discectomy and fusion (ACDF) and anterior cervical corpectomy fusion (ACCF) for patients with multilevel cervical spondylotic myelopathy. From a total of 387 relevant citations, the authors identified four cohorts in six studies involving 258 patients for inclusion in their meta-analysis. From these studies, there were 139 who underwent ACDF and 119 underwent ACCF. The authors concluded that "compared to ACCF with plate, ACDF with plate had similar postoperative JOA score, fusion rate, and higher cervical lordosis improvement, lower complication and smaller surgical trauma".

While the authors should be commended for undertaking an important study in the attempt to answer a frequently asked question, "Is it better to perform ACDF or an ACCF in patients with multilevel CSM?", the final conclusions of this study should be taken with caution. Like all meta-analysis, the conclusions of the study are based on the quality of the studies reviewed. In this case, the studies identified in the meta-analysis did not include any randomly controlled trials (RCT), and all were retrospective studies. Therefore, the issue of surgeon selection "bias" remains a concern and may be underestimated.

This is particularly important since frequently the decision for surgeons to select anterior cervical discectomy

versus corpectomy is frequently associated with location of the offending structure resulting in the cervical myelopathy. If the pathology resulting in spinal stenosis and cord compression/dysfunction is due to compressive pathology behind the vertebral body, it is difficult for an anterior cervical discectomy to effectively address this and a corpectomy is typically indicated. For example, for patients with extruded fragments behind the vertebral body, or large spondylotic bars causing compression cephalad or caudal to the disc space may not be adequately addressed with ACDF. However, this meta-analysis would suggest that outcomes would be similar.

Ultimately the authors have identified the shortcomings of their studies in their discussion, and recognize that well-designed, prospective RCT remain necessary in the future. Therefore, when attempting to apply the results of this study to their practice, the reader should be aware of the limitations of the studies reviewed. Furthermore, until additional "higher" level studies are performed, surgical procedures should continue to be individualized to the patient pathology and adjusted based on surgeon experience and preference.

Conflict of interest None.

F. H. Shen (✉)
Department of Orthopaedic Surgery, University of Virginia,
P.O. Box 800159, Charlottesville, VA 22908, USA
e-mail: fhs2g@virginia.edu; FHS2G@hscmail.mcc.virginia.edu