Reply to Letter to Editor Regarding "Multilevel Anterior Lumbar Interbody Fusion Combined with Posterior Stabilization in Lumbar Disc Disease – Prospective Analysis of Clinical and Functional Outcomes"

Resposta à carta ao editor referente ao artigo "Artrodese lombar intersomática anterior multinível combinada com estabilização posterior em discopatia lombar – Análise clínico-funcional prospetiva"

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First, I would like to thank you for the letter to the editor regarding the prospective study "Multilevel Anterior Lumbar Interbody Fusion Combined with Posterior Stabilization in Lumbar Disc Disease - Prospective Analysis of Clinical and Functional Outcomes."[1]

One of the points presented in the letter, in which articles on scoliosis rather than degenerative disco-arthropathy are cited, are the risk of spinal manipulation being associated with complications.[2,3] We agree, and it is clearly documented that spinal manipulation, especially in the correction of deformities with very pronounced curvatures, may be associated with loss of intraoperative potentials and risk of spinal cord injury. However, our work refers to degenerative discoarthropathies without relevant scoliosis, and there is no relevant manipulation of the spine other than elevating the disc spaces by applying the lumbar interbody cages.[1]

Given the clinical and imaging results obtained in our sample of unilateral and multilevel anterior lumbar interbody arthrodesis, and the minimal incidence of complications obtained, we found that, even in the significant presence of non-union risk factors and previous lumbar spine surgery, this option guarantees excellent clinical, functional and radiographic results in degenerative discoarthropathy.[1]

As stated in the original article, in terms of morbidity, unlike the posterior approaches, which involve extensive dissection of the paravertebral muscles, and the lateral pathway, which involves crossing the psoas muscle, the anterior lumbar spine path does not interfere with any spinal muscle and does not include muscle disinsertions. Thus, in theory, it is an approach with less bleeding, which may allow faster recovery in terms of pain (with less need for painkillers) and functional postoperatively (with a shorter hospital stay) and an earlier more stable spine because it does not interfere with the stabilizing muscles. In addition, the anterior approach does not imply removal of posterior elements of the spine, nor entry into the spinal canal or manipulation of spinal roots to access the disc space, thus decreasing the risk of iatrogenic injury and complications in these important structures, in comparison with the posterior approach.[4–8]

We also consider that, if we respect the surgical technique of anterior lumbar interbody arthrodesis, as described in the original article, and if it is performed by a trained and experienced surgeon, complications can be almost eliminated, and it is even possible to have a reduction in complications compared to usual posterior approaches. These data are confirmed by several works related to this technique mentioned also in the

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original article.[1,4,5,7,9,10] Above all, we consider, as the original article indicates, that the biomechanical advantages and excellent clinical-functional and radiographic results of this technique justify its more frequent use by spine surgeons, and the risk of some rare complications should not be a reason to avoid it. We emphasize that, as with any other surgical technique, it should naturally be performed by surgeons with training and experience in the approach to obtain the best results and minimize complications.[11–14]

As indicated in the original article, this technique allows to avoid direct manipulation of the canal or roots, being based primarily on indirect decompression, it has a quite solid stability at the expense of interbody cages with integrated screws, further reinforced by a percutaneous pedicular fixation, as it is also confirmed in the work by Yeager et al cited in the letter to the editor.[1,15] In short, given our results and their confirmation by several other studies, including the issue of the approach and possible complications, we are convinced and maintain the final conclusion regarding the technique described.[1]

Conflict of Interests

The authors have no conflict of interests to declare.

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