

# Modified open-door laminoplasty for the surgical treatment of cervical spondylotic myelopathy in elderly patients. Biomechanical concerns

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Dear Editor

I have read with interest the article about *Modified open-door laminoplasty for the surgical treatment of cervical spondylotic myelopathy in elderly patients* [1] and would like to add few comments.

It is well recognized that in addition to spinal cord decompression one of the purposes of the laminoplasty is preservation of the posterior tension band, represented by nuchal ligaments, supraspinous and interspinous ligaments as well as yellow ligaments [2–4]. This is the well-described benefit of laminoplasty over laminectomy, which allegedly will help to reduce the risk of postoperative neck deformity (postoperative kyphosis) [5].

The authors of this article described an elegant technique, where the laminae are transected bilaterally and temporarily removed en bloc. This obviously involves disconnection of the laminae from the cranial and caudal attachments.

I can clearly see the technical benefits of this technique; however, I think it has a major disadvantage. This technique involves disruption of the posterior tension band. As a result of this, the expected benefit of laminoplasty over laminectomy is eliminated. This may not be a major problem in patients with relatively short life expectancy; however, in young patients this will inevitably lead to inversion of the normal lordosis and clinical deterioration. Therefore, I think that the described technique is not going to bring any significant benefit over laminectomy when the biomechanically important posterior tension band is disrupted. In addition to this, there would be a few drawbacks represented by the additional cost of implants and additional time required to fix the laminae back.

Unfortunately, I could not see the long-term outcome results after such procedures, which I think would be beneficial prior to suggesting this technique. It is important to notice that the images published in the article demonstrated excellent spinal cord decompression; however, there is an already recognizable reduction of the normal lordosis on the postoperative scans.

A critical assessment of the biomechanics of the spine is of paramount importance, and the effects of disruption of the posterior tension band should be carefully analyzed and clinically scrutinized.

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