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Letter to the Editor

LETTER TO EDITOR REGARDING "SHORT SEGMENT FIXATION OF THORACOLUMBAR FRACTURES WITH PEDICLE FIXATION AT THE LEVEL OF THE FRACTURE".

Alessandro Rava [1], Massimo Girardo [2], Simona Legrenzi [1], Alessandro Massè [1], Federico Fusini [1]

1. Department of Orthopaedic and Traumatology, Orthopaedic and Trauma Centre, Città della Salute e della Scienza di Torino, University of Turin, Turin, Italy
2. Department of Orthopaedic and Traumatology, Spine Surgery Unit, Orthopaedic and Trauma Centre, Città della Salute e della Scienza di Torino, Turin, Italy

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ABSTRACT

Dear Editor, we read with great interest the article by Dr. Caruso et al. published in your journal which addresses the controversial and actual topic of short segment fixation with short screws in fractured vertebra for thoracolumbar vertebral fractures. The topic is of great interest in the scientific community and in clinical practice with a fervid literature focusing on the topic. We would also like to congratulate the authors for their perspective study which required several years to complete. It must be noted, however, that Magerl classification, despite its continued use in surgical practice, is not up-to-date, and it was substituted in 2013 by Vaccaro classification of Thoracolumbar fracture. Finally, we would like to thank the authors for the interesting point of discussion raised by their article, and we hope soon to read more prospective comparative or randomized controlled trials including both treatments.

1. Letter to the editor

Dear Editor,
We read with great interest the article by Dr. Caruso et al.[1] published in your journal which addresses the controversial and actual topic of short segment fixation with short screws in fractured vertebra for thoracolumbar vertebral fractures. The topic is of great interest in the scientific community and in clinical practice with a fervid literature focusing on the topic.
First of all, we would like to congratulate the authors for their perspective study which required several years to complete. It must be noted, however, that Magerl classification, despite its continued use in surgical practice, is not up-to-date, and it was substituted in 2013 by Vaccaro classification of Thoracolumbar fracture [2]. Furthermore, the TLIC score [3] is an important tool to help surgeons decide between surgical or conservative management, since both A1 and A2 Magerl's classification fractures could be successfully treated both with a conservative or a surgical solution.

The thoracolumbar junction is a transition zone between a posterior curve (thoracic spine) and an anterior curve (lumbar spine); for this reason, it is extremely important to obtain a solid fracture fixation and preserve, at the same time, the spine biomechanics.
Many surgical strategies are reported in the literature. Saglam et al.[4] reported that different types of constructs have the same radiological results but the shorter ones may better preserve the spine flexibility. On the other hand, considering the fact that a gold standard treatment has yet to be found, Wu et al.[5] reported that short segment constructs may be a good choice for thoracolumbar fractures in non-osteoporotic bones, while a long construct should be adopted for osteoporotic patients. According to Caruso et al., a recent meta-analysis study affirmed that the good results obtained by short segment fixation are not inferior to those obtained with long instrumentations[6]. We really appreciate that Caruso et al. aimed to preserve the spinal mobility as much as possible, and we think that a comparison with conservative or long instrumentation treatment could be useful and interesting.
In our daily surgical practice, we prefer to use a longer instrumentation with no arthrodesis and no screws in the fractured vertebra for the same types of fracture in young patients [7,8].

Corresponding author: Alessandro Rava, *dralessandrorava@gmail.com*
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We think that this surgical strategy is more effective in the prevention of eventual painful kyphotic deformity and ensures less risk of screw pullout, despite the most recent literature showing comparable implant resistence to pullout strength for both short and long posterior stabilization [9,10]. Additionally, we usually remove implants in young patients after at least 6-9 months post-surgery in order to preserve some spine segment flexibility.

Finally, we would like to thank the authors for the interesting point of discussion raised by their article, and we hope soon to read more prospective comparative or randomized controlled trials including both treatments.

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