



Letters to the Editor

Impact of MRI on thoracolumbar fracture classification

Letter to the Editor regarding: Thoracic and lumbar spine trauma classification systems fail to predict post-traumatic kyphotic deformity by Julia Crim et al ☆,☆☆



Letter to Editor

We read with great interest the paper by Julia Crim et al. entitled Thoracic and lumbar spine trauma classification systems to fail to predict post-traumatic kyphotic deformity (PTK) [1]. The study retrospectively analyzed the correlation between PTK and various thoracolumbar (TL) fractures' classifications, including AOSpine, Thoracolumbar Injury Classification (TLICS), Denis, and injury to the posterior ligamentous complex (PLC) in magnetic resonance imaging (MRI) [1]. The study concluded that the current TL fracture classifications could not reliably predict PTK. While recognizing the authors' efforts in carrying out this study, we have a few remarks to add to the discussion.

To begin, the authors identified PTK based solely on radiographic evidence of kyphosis 10–20°, with no clinical correlate [1]. While there is no agreement on how to define PTK, it has been recommended to define PTK based on back pain as well as radiological evidence of kyphosis [2,3]. In other words, whether the reported kyphosis was symptomatic is very important to the study's conclusions. Furthermore, the Cobb angle does not account for the natural kyphotic angle variations between the thoracic, thoracolumbar, and low lumbar regions [2]. The authors evaluated TL fracture classification's correlation with PTK in surgical and conservative treatment groups. However, in surgically treated cases, the nature of the surgical intervention, such as short vs. long-segment posterior stabilization and whether anterior column support is used, is a confounding variable. The correlation of TL classification with the PTK in conservatively treated patients is limited by the relatively low rate of patients treated conservatively.

The authors correctly point out that the leading cause of PTK is severe anterior column damage in a burst fracture or an overlooked PLC injury. These two components are the most contentious features of classification schemes, which may explain the disparity between classification and PTK [4]. The authors' study of other factors such as osteoporosis, contiguous injuries, and PTK is interesting. Another potential factor not considered in the study is the severity of disc injury as determined by MRI [5]. Overall, the study may shed light on the importance of PLC injury, vertebral body damage, and other variables such as osteoporosis in developing PTK. Furthermore, the study is one of the few that examines the predictive value of PLC damage in developing PTK [6,7].

Declaration of Competing Interest

None.

Supplementary materials

Supplementary material associated with this article can be found, in the online version, at doi:10.1016/j.xnsj.2022.100144.

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