Does kyphotic deformity correlate with functional outcomes in fractures at the thoracolumbar junction treated by 360° instrumented fusion?

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Sagittal balance and its relationship with back pain and functional outcomes has become an important factor in the management of thoracolumbar fractures. The kyphosis threshold at the thoracolumbar junction (TLJ) that produces a significant functional impairment remains unclear. Ninety-four patients who were treated surgically for TLJ fractures were evaluated after a follow-up period of 2-10 years. Functional evaluation based on the Oswestry and Hannover Scores (HS) was performed. Additionally, such patients underwent clinical and radiological evaluation. A significant inversely proportional correlation between the HS and the degrees of local kyphosis ("K-Angle") ($p = 0.0172$) was found. A significant directly proportional correlation between Oswestry Score and "K-Angle" ($p = 0.0142$) was found. Significantly poorer scores with both measurement tools (Hannover and Oswestry Scores) were found in patients with a kyphosis higher than 12°.