Middle column

From a retrospective study of 412 thoracolumbar region injuries, Denis introduces the concept of middle column or middle osteoligamentous complex between the traditionally recognized posterior ligamentous complex and the anterior longitudinal ligament. This middle column is formed by the posterior wall of the vertebral body, the posterior longitudinal ligament and posterior annulus fibrosus. The third column appears crucial, as the mode of its failure correlates both with the type of spinal fracture and with its neurological injury. Spinal injuries were subdivided into minor and major. Minor injuries are represented by fractures of transverse processes, facets, pars interarticularis, and spinous process. Major spinal injuries are classified into four different categories: compression fractures, burst fractures, seat-belt-type injuries, and fracture dislocations. These four well-recognized injuries have been studied carefully in clinical terms as well as on roentgenograms and computerized axial tomograms. They were then subdivided into subtypes demonstrating the very wide spectrums of these four entities. The correlation between the three-column system, the classification, the stability, and the therapeutic indications are presented [1].

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Denis F. The three column spine and its significance in the classification of acute thoracolumbar spinal injuries. Spine (Phila Pa 1976). 1983 Nov-Dec;8(8):817-31. PubMed PMID: 6670016.