

# 9<sup>th</sup> Annual Conference of Spine Experts Group

25-26 November 2011 ♦ Skopje, Macedonia  
Hotel Aleksandar Palace



SPINE  EXPERTSGROUP



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## FRACTURES OF THORACOLUMBAR JUNCTION: CONTROVERSIES AND UPDATES

**Vaso Kecojević, Milan Stanković, Mehran Salabat, Nemanja Kovačev, Ivica Lalić, Zoran Gojković, Vladimir Harhaji, Srđan Ninković**

**Clinical Center Vojvodina**

**21000 Novi Sad, Serbia, Hajduk Veljka 1**

Vertebral fractures crossing thoracolumbar junction (Th11-L2) are among the most common traumatic vertebral fractures (exclude compressive osteoporotic fractures). They occur by violent power, fall from height or most of them by motorcycle traffic accident. Injuries are seldom isolated, but might be associated with internal organ injuries, fractures of other bones, head and brain injuries, and neurologic deficit below the fracture level. From X 1999. – IX 2009. in our department were surgically treated 237 patients with 244 fractures of Th-L junction, average 22 per year. The most common cause of injury was traffic accident, fall off the motorcycle, then fall from the high. Most often suffers young males (average age 33.5). Associated injuries in our series we have in 30% of patients. In diagnostic was used X-ray, CT and MRI. Neurological deficit (from numbness to paralysis) we have in 48% of cases. In all cases we performed posterior instrumentation. Transpedicular fixation was performed at different manner: two levels below and above the fractured vertebra, short segmental fixation, short segmental fixation with transpedicular screws through the injured vertebra, if pedicle was unbrocken, one level below and two above the fracture site, and rare two levels below and three above. The decision was made according the amount of comminution and x-ray instability imaging of particular segment. Decompression laminectomy was performed in cases of spinal canal stenosis and/or neurological deficits. In four cases we had to suture dura mater with apposition of fascial patch and fibrin glue. Neurological improvement was obtained in 85% of patients who had a deficit, Evaluation was made according to neurological findings, and Frenkel and Meger's scale, X-ray examination and EMNG findings. In ten cases we have screw fracture (all in short segmental fixation), and in 4 we have fixation failure (protrusion of screws after 16 months-2 years, that needs to be extracted). In one case we missed level due to poor x-ray arm in theatre, and put screws in injured vertebra and two level above, with good follow up. Transpedicular fixation in managing fractures of vertebral Th-L junction is safe and fast method with satisfactory results, in our sample. Still, there are controversies about the manner of level fixation.

Fracture, vertebrae, transpedicular, segmental fixation.

