International Journal of ChemTech Research
CODEN (USA): IJCRGG, ISSN: 0974-4290, ISSN(Online):2455-9555
Vol.12 No.03, pp 61-63, 2019

Thoracic Spine Fracture-dislocation without Neurological deficit, a case report

Alamsyah Faritz Siregar[1]*, Otman Siregar[2]

[1]Resident of Orthopaedic and Traumatology, Faculty of Medicine,University of North Sumatera, Haji Adam Malik General Hospital, Medan, Indonesia
[2]Consultant, Dept. Of Orthopaedic & Traumatology, Faculty of Medicine, University of North Sumatera,
Haji Adam Malik General Hospital, Medan, Indonesia

Abstract : Severe thoracic spinal fracture-dislocation without neurological symptoms is frighteningly rare, an operation as one of choice of treatment.
Key Words : spinal, fracture-dislocation, neurological, without deficit.

Introduction and Background

Fracture-dislocation of the thoracic spine comprise about 16% of all thoracic and lumbar fractures, and are commonly caused by high road accidents. Unlike the cervical spine, the thoracic spine is stabilized by its connection to the rib cage by transverse costal ligaments. The position of the articular facets provide resistance to axial rotation and horizontal translation. Therefore, a severe injury is required to bring about a fracture-dislocation at this level. These injuries, due to the narrowness of the thoracic canal and the precarious blood supply of the cord, lead to complete paraplegia in more than 80% of cases.

Thoracic spine fracture-dislocations that are not accompanied by neurological damage are extremely rare, and only a few cases are described in the literature.

CASE

A 17-year-old female had T4 to T5 vertebral fracture and anterolateral dislocation without neurological symptoms. The three-dimensional reconstruction by computedtomography indicated the injuries in detail.

DOI= http://dx.doi.org/10.20902/IJCTR.2019.120310

Figure.1 AP and Lateral radiographs of the thoracic spine revealed fracture and anterolateral dislocation of the T4 and T5 vertebrae

A patient with thoracic spinal fracture-dislocation without neurological symptoms should be evaluated in detail, especially with three-dimensional reconstruction by computed tomography.

Figure.2Three dimensional computed tomography scan of the thoracic spine revealed fracture and complete dislocation of T4 to T5

Although treatment is individualized, reduction and internal fixation are advised for patient if the condition permits.

Results

3 weeks after conservative, patient have no complain about pain, and any other neurologic deficit, patient suggested to mobilization with ThoracolumbosacralOrthosis after bedrest continuefor 3 months.

Conclusion

Severe thoracic spinal fracture-dislocation without neurological symptoms is frighteningly rare, an operation as one of choice of treatment.

Key Words: spinal, fracture-dislocation, neurological, without deficit.

References

1. Shuai Zhang and Ting-Bin Yan. Severe fracture-dislocation of the thoracic spine without any neurological deficit. World Journal of Surgical Oncology (2017) 15:3.
2. G. Vilà-Canet, A. García de Frutos, A. Covaro, et al. Thoracolumbar fractures without neurological impairment: a review of diagnosis and treatment. EOR volume 1 September 2016 .
3. JanssonKa, Blomqvist p, Svedmark p, et al.Thoracolumbar vertebral fractures in Sweden: an analysis of 13,496 patients admitted to hospital. *Eur J Epidemiol*2010;25:431-437.
4. looby S, flanders a.Spine trauma. *RadiolClin North [Am]* 2011;49:129-163.
5. Dai LY. Principles of management of thoracolumbar fractures. OrthopSurg 2012;4:67-70
6. Rajasekaran S. Thoracolumbar burst fractures without neurological deficit: The role for conservative treatment. Eur Spine J 2010;19Suppl 1:S40-7.
7. Audigé L, Bhandari M, Hanson B, Kellam J. A concept for the validation of fracture classifications. J Orthop Trauma 2005;19:401-6
8. McAfee PC, Yuan HA, Fredrickson BE, Lubicky JP. The value of computed tomography in thoracolumbar fractures. An analysis of one hundred consecutive cases and a new classification. J Bone Joint Surg Am 1983;65:461-73.
9. Aebi M. Classification of thoracolumbar fractures and dislocations. Eur Spine J 2010;19Suppl 1:S2-7.

*****