

Miraculous Mishap: Recovery From Thoracolumbar Spine Fracture-Dislocation

¹Mohd Saidfudin, Nur Sa'idah; ²Hashim, Muhammad Hafiz; ²Silvaraju M; ¹Ng BW

¹Orthopaedic & Traumatology Department, HCTM UKM, Jln Yaacob Latif, Kuala Lumpur, Malaysia

²Orthopaedic Department, Hospital Serdang, Jln Puchong, Kajang, Selangor, Malaysia

INTRODUCTION

Spine fracture-dislocation often resulted from high-energy trauma leading to deteriorating sequelae. We share an incident of incomplete neurological deficit sustained from spine fracture-dislocation injury, in which with early intervention and multidisciplinary approach produces excellent outcome.

REPORT

A 22 year-old lady rider alleged motorbike skidded. Post-trauma she sustained back pain and bilateral lower limbs weakness markedly on the right side with numbness, thus unable to ambulate. She also developed spinal shock upon arrival. Her injury was classified as ASIA Impairment Scale [AIS] B equivalent to Thoracolumbar AOSIS T12-L1:C, L2-L4:A0,N3,M1.

Figure 1: Plain radiograph shows a burst fracture-dislocation of T12/L1 spine, with multiple L2 until L4 transverse and spinous process fractures.



Further MRI revealed spinal cord edema with epidural hematoma, thus intravenous Dexamethasone 8mg TDS was commenced. Patient underwent posterior decompression spinal instrumentation and fusion of T11-L3 with T12 (partial) and L1 (wide) laminectomy plus dura repair. She was then managed comprehensively by rehabilitation team and able to ambulate without aid by three months post trauma, albeit occasionally experiencing nocturnal incontinence.

Figure 2: Good reduction and restoration of spine alignment post-operatively.

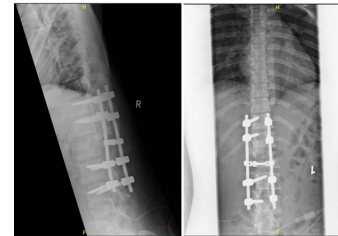


Table 1 showing her neurology grading improvement three months post-trauma.

| Post-trauma Neurology level | Day 1 | | 3 months | | | | | |
|-----------------------------|--------------------|---------|----------|---------|--------------------|---------|--------|---------|
| | Right | Left | Right | Left | | | | |
| | Power | Sensory | Power | Sensory | Power | Sensory | Power | Sensory |
| T12 | - | 2 | - | 2 | - | 2 | - | 2 |
| L1 | - | 1 | - | 2 | - | 1 | - | 2 |
| L2 | 3 | 1 | 4 | 2 | 3 | 1 | 5 | 2 |
| L3 | 3 | 1 | 4 | 2 | 3 | 1 | 5 | 2 |
| L4 | 3 | 1 | 3 | 2 | 4 | 1 | 5 | 2 |
| L5 | 1 | 1 | 3 | 2 | 4 | 1 | 5 | 2 |
| S1 | 1 | 1 | 3 | 2 | 4 | 1 | 5 | 2 |
| Reflex | Absent | | Normal | | Normal | | Normal | |
| Anal | Sensation: present | | | | Sensation: present | | | |
| | Tone: Lax | | | | Tone: Present | | | |
| BCR | Absent | | | | Absent | | | |

CONCLUSION

In a nutshell, early intervention followed by rehabilitation in a young spine fracture-dislocation patient with incomplete spinal cord injury produces fruitful outcome. Thus, reducing morbidity, mortality and eventually facilitates early return to work as a functioning individual.

REFERENCES

1. Zeng J,et al., Complete fracture-dislocation of the thoracolumbar spine without neurological deficit:A case report and review of the literature. *Medicine (Baltimore)*. 2018;97(9):e0050. doi:10.1097/MD.00000000000010050
2. Cheung, V., et al., Methylprednisolone in the management of spinal cord injuries: Lessons from RCT. *Surgical neurology international*,(2015),6,142.

<https://doi.org/10.4103/2152-7806.163452>

3. Wood, et al., Management of thoracolumbar spine fractures. The Spine Journal, (2014),14(1),145–164. doi:10.1016/j.spinee.2012.10.041