International Journal of Medical Science and Clinical Research
Online-ISSN: 2664-7761; Print ISSN: 2664-7753
Received: 05-02-2020; Accepted: 07-03-2020; Published: 13-06-2020
www.journalofmedical.com
Volume 2; Issue 2; 2020; Page No. 14-15

Impact on d_4 spinous fracture and its rapid recovery by surgery of posterior stabilization: Case report

P Thenmozhi[1*], Vignesh[2]
[1] Department of Medical Surgical Nursing, Saveetha College of Nursing, SIMATS, Thandalam, Chennai, India
[2] M. Sc (NPCC) II yr, Saveetha College of Nursing, SIMATS, Thandalam, Chennai, India

Abstract
Background: RTA D_4 spinous fracture is a rare case, it can be full understood and its usually due to trauma in the spinal cord or nerve injury, also known as unstable fracture. This may cause spinal cord damage and leads to temporary or permanent paralysis.
Case presentation: A 26yrs old men presented with backache, sustained injury to the spine, loss of consciousness, lower limb weakness due to road traffic accident in 2 Wheeler 07|04|2019. So Saveetha medical hospital diagnosed him with D4 spines process fracture and got hospitalized 5 Weeks and receiving the symptomatic treatment [Medical] and on strict bed rest not willing to want surgical treatment, such as colostomy. GCS is 3t/15 E1M1V1. Around 40 days the patient presented with same condition similar symptoms and required treatment.
Conclusion: D4 spinous fracture treated with back brace and traction apply for minor or stable fracture. Unstable fracture treated posterior stabilization with screws, rods, wires, or cages are used to reconnect bone pieces.

Keywords: Case report, D_4 spinous fracture, posterior stabilization, screws, rods, wires, Amikacin, Meropenem

Introduction: Background

RTA D_4 spinous fracture is a rare case, it can be full understood and it's usually due to trauma in the spinal cord or nerve injury, also known as unstable fracture. This may cause spinal cord damage and leads to temporary or permanent paralysis, also its extent of paralysis depends on location of injury in the spinal column. These present reports describe the patient with spinous fracture who got admitted in our hospital.

Case presentation

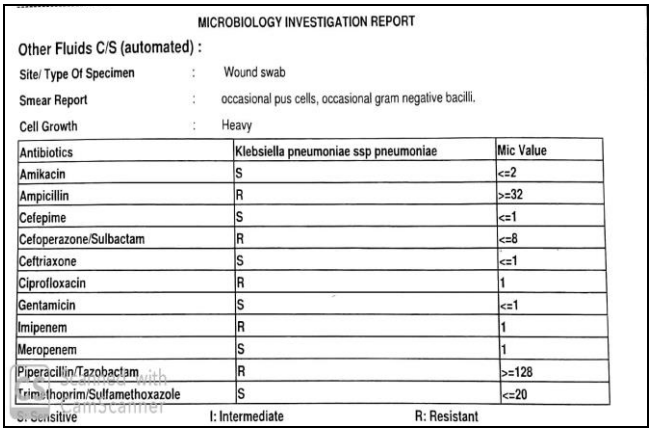
A 26yrs old men presented with backache, sustained injury to the spine, loss of consciousness, lower limb weakness due to road traffic accident in 2 Wheeler 07|04|2019.So Saveetha medical hospital diagnosed him with D4 spines process fracture and got hospitalized 5 Weeks and receiving the symptomatic treatment [Medical] and on strict bed rest not willing to want surgical treatment, such as colostomy. GCS is 3t/15 E1M1V1. Around 40 days the patient presented with same condition similar symptoms and required treatment. So, the patient got extensive neurological and integumentary assessment, Also the patient had significant history of psoriasis since 4yrs, but not on treatment. It was diagnosed Government hospital, Kanchipuram. On physical examination patient develops foul smelling, sluff presented in gluteal region, no active range of motion and sensory deficit score chat shows power on right lower limb 0/5, left lower limb 0/5, no soakage exist. And wound discharge fluid taken send for cultural sensitivity.

Grade 4 bed sore

Fig 1

Fig 2

Culture sensitivity



MICROBIOLOGY INVESTIGATION REPORT

Other Fluids C/S (automated) :

Site/ Type Of Specimen : Wound swab

Smear Report : occasional pus cells, occasional gram negative bacilli.

Cell Growth : Heavy

Antibiotics	Klebsiella pneumoniae ssp pneumoniae	Mic Value
Amikacin	S	<=2
Ampicillin	R	>=32
Cefepime	S	<=1
Cefoperazone/Sulbactam	R	<=8
Ceftriaxone	S	<=1
Ciprofloxacin	R	1
Gentamicin	S	<=1
Imipenem	R	1
Meropenem	S	1
Piperacillin/Tazobactam	R	>=128
Trimethoprim/Sulfamethoxazole	S	<=20

S: Sensitive I: Intermediate R: Resistant

Fig 3

Wound swab shows occasional heavy gram-negative bacilli and those drugs are sensitive as follows:
Amikacin, cefepime, Ceftriaxone, gentamicin, meropenem. But patient is on Inj. Meropenem 1 gm iv, Inj. Amikacin 500 mg bd iv, Tab. Doxy 100 mg oral, Tab. Metronidazole with zinc oxide 100 mg oral.

Smear report

Table 1

Test	Result	Reference interval
Types of fluid Colour Appearance	Pleural fluid Reddish Turbid	Straw pale to dark yellow clear

Discussion

- USG bilateral gluteus study shows, diffuse bilateral subcutaneous oedema is noted.
- USG E- FAST, Bladder empty, Foleys bulb in situ.
- CT- Brain plain shows, Moderate bilateral pleural effusion,
- D4 burst compression fracture with retro pulsed fracture fragment extending to spinalcanal possibly impinging on cord, posterior stabilization rods, screws across D_2, D_3 and D_4, D_5D_6 levels.
- Ill- defined irregular hypodense non-enhancing areas in segment 7 of liver.
- MRI- DORSO LUMBO- sacral spine with whole spine screening shows,
- Bilateral mild haemothorax and contusion in bilateral basal segments.
- Unstable compression fracture involving D4 vertebral body.

Anterior wedge compression fracture involving the D5 vertebral body. Oblique simple fracture line extending from the antero-superior endplate to the inferior end plate of L2 vertebral body.

Conclusion

D4 spinous fracture treated with back brace and traction apply for minor or stable fracture. Unstable fracture treated posterior stabilization with screws, rods, wires, or cages are used to reconnect bone pieces. Surgery may also need to vertebrae relive pressure on spinal cord or remove any damage vertebral discs.

Acknowledgements

List of abbreviations

GCS: Glasgow coma scale.

Conflict of interest

None

Funding

None

Consent for publication

Informed consent was obtained from parents of the patients to publish this case in medical journal.

Ethical approval

Ethical approval is not required at our institution for publishing a case report in medical journal.

References

1. Shapiro S, Abel T, Rodgers RB. Traumatic thoracic spinal fracture dislocation with minimal or no cord injury. Report of four cases and review of the literature. J Neurosurg, 2018, 236.
2. Sixta S, Moore FO, Ditillo MF, Fox AD, Garcia AJ, Holena D, *et al*. Screening for thoracolumbar spinal injuries in blunt trauma: An Eastern Association for the Surgery of Trauma practice management guideline. J Trauma Acute Care Surg, 2018.
3. Roaf R. A study of the mechanics of spinal injuries. J Bone Joint surgery, 2019, 810.
4. Medline Plus. Compression fractures of the back, 2019. https://medlineplus.gov/ency/article/000443.htm
5. American Academy of Orthopedic Surgeons. Ortho Info, 2019. Osteoporosis and Spinal Fractures. https://orthoinfo.aaos.org/en/diseases--conditions/osteoporosis-and-spinal-fractures