

# From Rehab to the OR: Cervical Cord Compression in a Polytrauma Patient

Michael Moradi, MD<sup>1</sup>, Lisa Suriya, MD<sup>1</sup>, Negin Gohari, DO<sup>1</sup>

<sup>1</sup>Westchester Medical Center, Valhalla, NY, USA



## Case Presentation

- 65-year-old male fell down 15 stairs: +HS, +LOC (~5 mins) i/s/o alcohol intoxication.
- Imaging revealed extra-axial hemorrhage, subarachnoid hemorrhage, and nondisplaced rib fractures.
- Cervical/thoracic/lumbar spine CT were unremarkable.
- Patient was evaluated by trauma surgery and neurosurgery.
- Patient was admitted to trauma surgery.
- Neurosurgery recommended levetiracetam for 7 days and signed off, citing no acute surgical intervention.
- Trauma surgery managed the patient medically.
- While in acute care, he noted right upper extremity weakness, initially attributed to shoulder pathology.
- X-ray showed calcific tendinitis.
- After ten days in acute care, he was admitted to inpatient rehabilitation.

## Clinical Course

- On admission to acute rehab, he reported severe stabbing neck pain radiating to the right shoulder.
- Initially, right shoulder flexion/abduction strength 2/5 and right elbow flexion/extension 4/5.
- Over the next few days, patient endorsed increased pain and weakness – even with pain medication adjustments.
- Reassessment of exam revealed: right shoulder flexion/abduction strength 1/5, right elbow flexion/extension 3/5.
- Decision was made to obtain an MRI due to worsening pain and increased weakness.
- **MRI revealed severe spinal canal stenosis and spinal cord compression at C5–C6.**
- **He was readmitted to acute care and underwent posterior spinal fusion (C2–T2) with C3–C7 laminectomies, followed by anterior cervical discectomy and fusion at C5–C6.**
- Postoperatively, his pain and neurologic function improved.

## Discussion

- Differentiating cervical cord pathology from peripheral musculoskeletal is difficult.
- Initial right upper extremity weakness was attributed to shoulder pathology.
- Progressive motor deficits during rehabilitation prompted further evaluation.
- Imaging lead to a timely diagnosis and surgical intervention that prevented further neurologic decline.
- This case highlights the importance of ongoing neurologic assessment and maintaining suspicion for spinal pathology when exam findings change.

## Conclusion

- Inpatient rehabilitation is essential for **ongoing medical assessment.**
- Careful evaluation in rehabilitation can prompt further workup.
- Physiatrists play a critical role in identifying the cause of unexplained deficits.
- Early recognition and timely acute care transfer can significantly improve patient outcomes.