



Case Report

Traumatic Quadriplegia Treated Without Surgery: An Unusal Case

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Abstract

Quadriplegia commonly occurs due to cervical cord injury and rarely due to cortical injuries in the motor cortex which may be seen on keen observation done in Ct scan of brain. amount of impairment resulting from a spinal cord injury depends on the part of spinal cord injured and amount of damage done. Hereby reporting a case of biparietal contusion with quadriplegia with mild cervical cord compression by obliteration of subarachnoid space.

Background

The aim of presenting this case is to prove that, detail history and clinic examination of all head injury cases is an important factor for appropriate management and best results.

Introduction

The magnitude of damage to cerebral tissues following head trauma is determined by the primary injury, caused by the kinetic energy delivered at the time of impact, along with secondary injury that almost inevitably worsen the primary injury⁽¹⁾

Contusion progression is a common phenomenon that is seen more common in large contusions. Patients with large contusions and low initial GCS scores are at risk for delayed deterioration⁽²⁾

The transmission of energy along the brain stem and spinal cord is the cause of the cervical cord hemorrhages. These lesions are concentrated in the upper cervical segments where the initial

absorption of shear strains occurs before dissipation of the energy of impact. Relatively minimal cord movement during impact occurs because this region of the central nervous system is fixed by its lateral attachments⁽³⁾

Case Report

A 25 year old male presented with alleged history of assault and got injuries in head and neck following which he developed quadriplegia . He was evaluated outside with Ct brain which showed biparietal contusion all around motor cortex and MRI cervical spine which showed multiple level cervical cord compression. He was advised for anterior cervical disectomy for the the cervical cord compression.

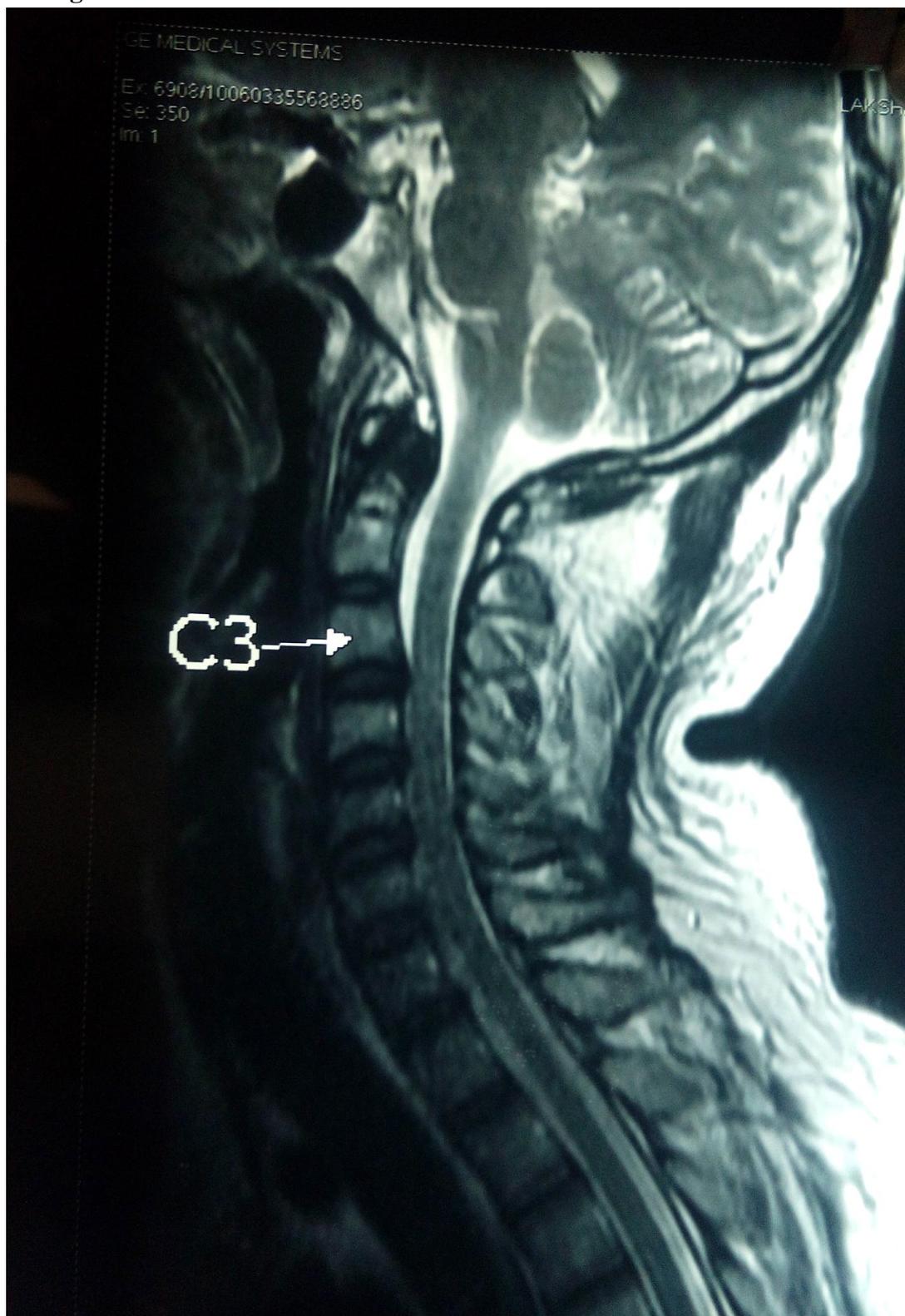
He was having bilateral plantar extensor but all other reflexes were normal. Tone was normal. He had no sensory abnormalities.

Since the clinical examination did not correlate with amount of cord injury we thought of treating

conservatively for 4 weeks and then decide surgery . He was treated with only physiotherapy. CT brain was repeted which showed resolving

biparietal contusion. his power starts improving. After four weeks when patient came for follow up his power was 5 in all 4 limbs.

Radiological images





Conclusion

Any case with trauma to both neck and brain, detailed history and clinical examination is mandatory such cases has to be correlated radiologically and only then plan for surgery. Moreover if no gross cord compression and with motor cortex injury is present its better to wait for 4 weeks and decide regarding surgical intervention.

Cervical canal measurement serves as an important aspect in such patents because, only cord diameter is less than 6 mm and its expected that such high deficits can occur.

References

1. David Kurland, Caron Hong, Bizhan Aarabi, Volodymyr Gerzanich and J. Marc Simard Hemorrhagic Progression of a Contusion after Traumatic Brain Injury: A Review J Neurotrauma.2012 Jan 1; 29(1): 19–31.
2. Hussein Alahmadi, M.D., Shobhan Vachhrajani, M.D., and Michael D. Cusimano, M.D., Ph.D., F.R.C.S.C. The natural history of brain contusion: an analysis of radiological and clinical progression Journal of Neurosurgery May 2010 / Vol. 112 / No. 5 / Pages 1139-1145
3. Hank H. Gosch, M.D., Elwyn Gooding, and Richard C. Schneider, M.D. Cervical spinal cord hemorrhages in experimental head injuries Journal of Neurosurgery December 1970 / Vol. 33 / No. 6 / Pages 640-645.