

# **Role of Osteopathic Treatment in the Management of Acute Traumatic Central Cord Syndrome: A Case Report**

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## **Introduction/Background:**

Acute Traumatic Central cord syndrome (ATCCS) is the most common subtype of incomplete spinal cord injury. Despite its prevalence, the management of central cord syndrome is an ongoing topic of controversy. No literature exists regarding the use of Osteopathic Manipulative Treatment (OMT) in the management of acute spinal cord injury.

## **Case:**

RL, a 70 year-old black male, was admitted to a community hospital after a fall backwards from a moving vehicle. He was found to be in neurogenic shock upon initial presentation, with motor and sensory losses in all extremities, with the upper extremities most affected. Magnetic Resonance Imaging showed multi-level spondylosis and diagnosis of ATCCS was made. Management was initially conservative with head elevation and blood pressure control. Osteopathic structural exam found severe somatic dysfunction affecting the rate and amplitude of the primary respiratory mechanism (PRM) and rigid upper thorax and inlet reducing head and neck drainage.

## **Results:**

At the patient's third osteopathic visit, he was found to have improved strength in his hands and returned sensation in the lower extremities. On exam, PRM had improved in rate and amplitude and dysfunction of the upper thorax and inlet segments had improved and decongested. Of note, no other medical interventions were done during this interval.

## **Discussion:**

OMT was safely used in this patient with ATCCS with significant gains seen in motor and sensory function and simultaneous improvements in osteopathic findings seen on exam. OMT with a focus on lymphatic drainage and the primary respiratory mechanism may play a role in aiding recovery from ATCCS by reducing regional edema and inflammation.