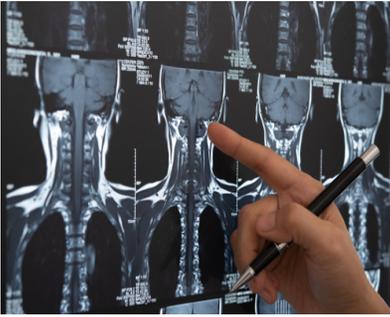


# Spine Management Report

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## Spinal Cord Injury - MINOR Trauma



In a recent paper (2021) by Saodekar et al. the authors stated, "The aim of the present study was to investigate the spinal canal diameter and the space available for the cord at the level of the intervertebral disc in patients suffering from acute cervical SCI after a minor trauma to the cervical spine." (p 483)

The authors continue by stating, "In most countries, acute spinal cord injury occurs at an annual rate of 20-40 persons per million. The main causes of spinal cord trauma are motor vehicle accidents, sports and recreational activities, accidents at work and falls at home." (p 483)

It is important to not only understand the mechanism of injury, but also the forces that may be involved. Accepting the fact that minor trauma can play a serious role in injury is a critical part of patient care. The paper continues by reporting, "Neurologic deficits after trauma to the cervical spine may develop in the absence of bony damage, and such instances often are described as SCI without radiographic abnormality or as SCI without radiologic evidence of Trauma." (p 483)

This simply means that there can be serious injuries **WITHOUT** spinal fracture, therefore simply screening for fractures alone is not a comprehensive evaluation in the trauma patient. Interestingly, the authors discuss, "Acute spinal cord injury (SCI) after a minor trauma to the cervical spine has been reported in patients without preceding neurologic symptoms. Spinal canal stenosis may be the reason for the discrepancy between the severity of the injury and that of the trauma. The spinal canal to vertebral body ratio is often used to assess canal stenosis on conventional radiographs." (p 484)

Different imaging modalities assess different tissues in the body, the authors continue, "However, the ratio does not appraise soft-tissue stenosis and canal narrowing at the level of the intervertebral disc. Parameters measured on magnetic resonance (MR) images may thus be more meaningful." (p 484) Radiographs visualize bones and the spaces around them while MRI (Magnetic Resonance Imaging), assesses the tissues that connect all those bones together. That includes the spinal cord, ligaments, and intervertebral discs.

In conclusion the paper states, "MR can be employed in acute cervical trauma to demonstrate fracture-dislocations as well as to delineate soft tissue pathologic states. Assessment of the number of segments of the spinal cord involved, by MR Imaging is helpful in predicting the prognosis of the patient." (p 485) It is critical that when working with healthcare providers, you are working with those that understand what imaging techniques are best suited for the trauma patient, and they do not reach pre-determined conclusions based on the forces involved.



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### REFERENCE:

1. Saodekar, H. S., & Agarwal, K. K. (2021). Evaluation of patients with cervical spine injury and predicting the risk and severity of acute spinal cord injury after a minor trauma. *International Journal of Orthopaedics*, 7(1), 483-485.