

SCIWORA (SPINAL CORD INJURY WITHOUT RADIOLOGICAL ABNORMALITY)

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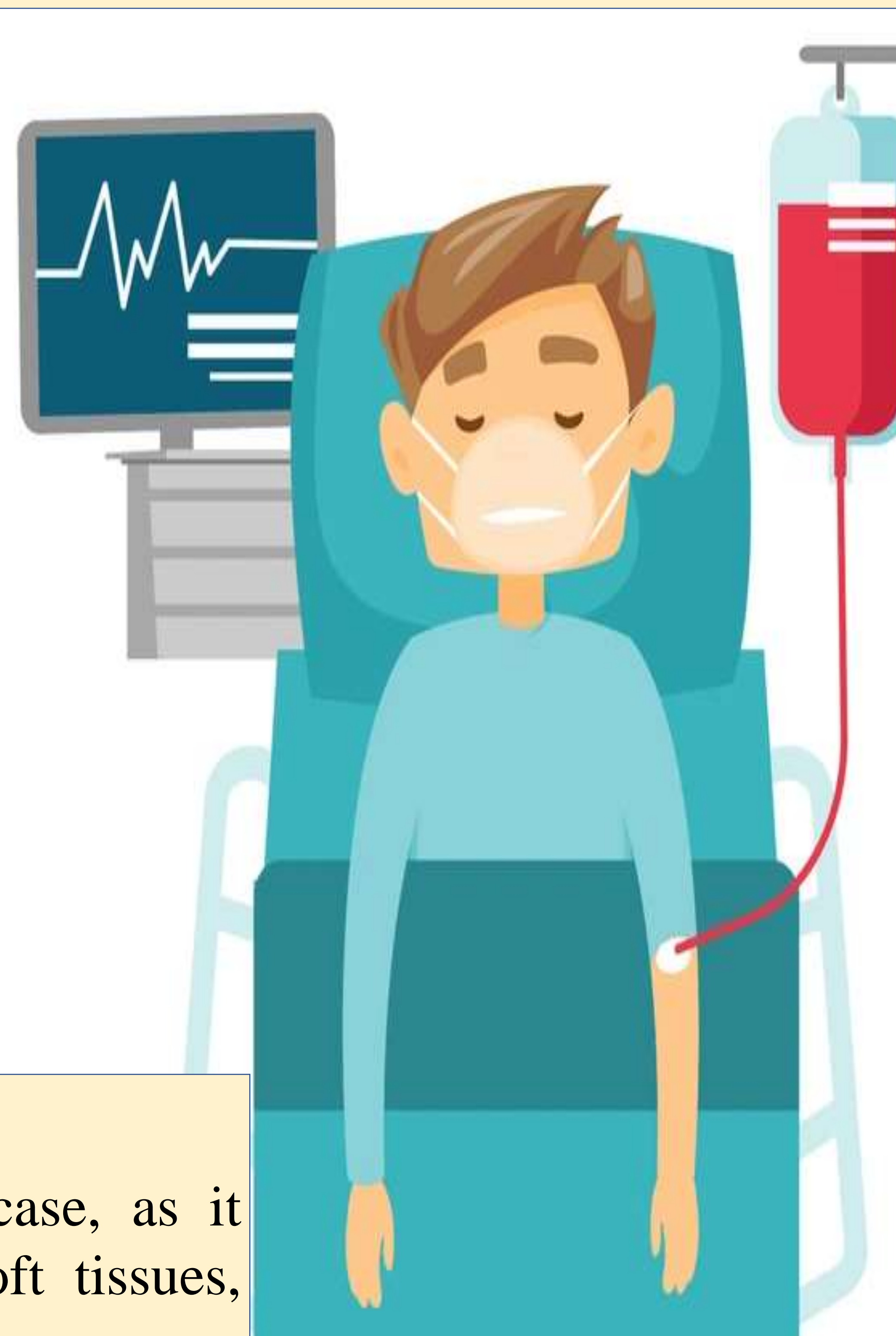
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Introduction:

Spinal Cord Injury Without Radiographic Abnormality (SCIWORA) is characterized by a clinical presentation of traumatic neurological deficits without corresponding pathological findings on X-ray or CT scans. This condition is most commonly observed in pediatric populations.

Discussion:

- SCIWORA typically results from hyperextension or hyperflexion injuries, which can temporarily occlude spinal arteries, leading to temporarily ischemic events
- In this case,
 - A fracture of the spinous process alone does not cause spinal cord injury, as it is not directly involved with the spinal canal or the spinal cord
 - MRI findings confirmed that the patient sustained a spinal hyperflexion sprain injury without evidence of spinal cord injury.
 - The presence of edema suggests that a temporary blockage of vessels may have caused a transient loss of function
- The multidisciplinary team agreed to treat this patient as a case of SCIWORA, and steroid therapy may be beneficial based on this assessment.



Conclusion:

The administration of steroids was the optimal treatment in this case, as it effectively reduced traumatic inflammatory edema in the spinal soft tissues, improving spinal perfusion and facilitating recovery.

Case description

- Age :
 - 14 year old male motorbike rider,
- Mechanism :
 - High-velocity motorbike collision (MB vs. MB)
- Post Incident Symptoms:
 - Brief episode of loss consciousness and retrograde amnesia, otherwise able to regain consciousness spontaneously and his Glasgow Coma Scale (GCS) score remained full.
 - Subsequently, the patient developed paraplegia with paresthesia in both lower extremities
- Hemodynamical
 - Stable with absence of neurological, spinal, or hemorrhagic shock.
- Clinical findings:
 - Neurological examination revealed symmetrical loss of sensation and motor power in both lower limbs, starting from the L1 level, consistent with upper motor neuron lesion characteristics.
- Imaging CT brain:
 - A CT brain scan showed no evidence of intracranial hemorrhage.
- Imaging CT thoracolumbar scan:
 - Revealed right transverse process fractures at T4 and T7.
- Imaging MRI whole spine:
 - However the entire spine demonstrated only interspinous soft tissue edema from C7 to T3, indicative of a hyperflexion sprain injury, without signs of spinal cord injury.
- Treatment
 - The patient was treated conservatively with a high-dose dexamethasone regimen,
- Outcome
 - Resulting in significant neurological improvement, allowing discharge with a minimum motor power of 3/5.

References :

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