Last Updated: 10.24.2025

Exclusion criteria:

- SCI secondary to underlying congenital condition
- SCI secondary to acquired medical or surgical condition

Complications to Consider
During Primary Survey
• C1 - C4 injuries: highly likely to require

• If intubating, consider utilizing atropine

• Low cervical and high thoracic injuries: may require airway or respiratory

• Neurogenic shock or bradycardia: may

• Polytrauma: may develop hemorrhagic

mechanical ventilation

support

shock

vasopressors

to minimize bradycardia

require fluid resuscitation or

Patient presenting to ED with suspected spinal cord injury (SCI) following traumatic event (e.g., motor vehicle accident, sports or recreational injury, fall).



QR code for mobile view

Initiate Advanced Trauma Life Support (ATLS) per Trauma Surgery and ED

Early Priorities:

- **Avoid** hypotension
- Avoid hypoxia
- Provide adequate analgesia
- **Restrict** spinal movement (refer to <u>Spinal Stabilization Guidance</u>)

Primary Survey

Complete organized evaluation to identify life threatening injuries and intervene as necessary

Secondary Survey

- Complete organized evaluation to identify all injuries
- Order CT scan
- *Consult* Spine Surgery if not already involved (*Neurosurgery for concomitant head injury*)
- Place admission order to PICU

Complete initial disposition

- If spinal cord impingement is identified
 - Decompression is indicated within 24 hours
- **Determine** need for MRI spine surgeon and trauma physician
 - If MRI needed, spine surgeon and trauma physician to discuss timing of MRI with neuroradiology and anesthesia service
 -MRI completion is not required for admission-

Neuroprotection and Early Monitoring Treatment

- Initiate early neuroprotection and treatment for neurogenic shock
 - Maintain mean arterial pressure (MAP) to support spinal cord perfusion
 - Provide fluid resuscitation with crystalloid or blood products
 - Utilize inotropic support for refractory hypotension:
 - First line = norepinephrine for isolated SCI
 - Consider epinephrine or alternate agents for poly trauma or mixed shock physiology
- Complete abbreviated SCI exam
- Performed by Spine Service (NP, resident, fellow, or attending)
- Document within 30 minutes of consultation
- Place Foley catheter to manage bladder dysfunction and evaluate resuscitation
- Measure a post-void residual after foley placement
- Make NPO
- Consider placement for NG tube SCI patients at risk for ileus

Finalize disposition and prepare for transfer to ICU

See ICU algorithm



Contact: EvidenceBasedPractice @cmh.edu

Link to: synopsis and references