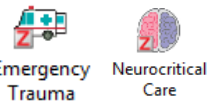
UCSF Benioff Children's Hospital Oakland

Quick Reference Guide for Traumatic Spine Injury

These recommendations are relevant to pre-hospital, referring hospital, ED and ICU

Referenced from Traumatic Spine Injury Pathway: Cervical and ThoracoLumbar Spine (Trauma # 8.5/ NeuroCritical Care # 2.3- found on Ambulance or Brain icon



Interventions to be considered:

- Initial Cervical Spine immobilization for: (1)C-spine tenderness, (2) Neurologic deficit (including stingers) (3) High force mechanisms (MVC, fall from height, etc), diving , sports, polytrauma
- When hx and exam DO NOT support removal of the collar, C-spine clearance should only be performed by Neurosurgery, Trauma Surgery, or Emergency Medicine attending physicians at their discretion
- Uncomplicated /routine cervical spine clearance – it is expected that ALL of the following criteria are met during exam before collar can be removed:
    - GCS = 14 or greater (GCS of 14 cannot be due to confusion)
    - Not hypotensive
    - Calm and able to focus on the exam
    - No neurologic deficits
    - No posterior midline neck tenderness and denies neck pain
    - Able to *self*-range the neck without pain or hesitation
    - No suspicion for intoxication, drug use or opioid administration in the last hour
    - No distracting injuries
    - Age less than 3 years: No suspicion of NAT, no history of MVC, no hx of fall >5 ft
- If criteria are not met- refer to diagnostic imaging guidelines (Section G) – do not order CT of the cervical spine without neurosurgical approval
- Consult Neurosurgery if: positive diagnostic imaging finding, any motor or sensory deficit at any time, any clinical concern for injury. Enter consult order ASAP
- Patients requiring cervical spine immobilization should be placed into an Aspen Collar.
- Upload outside images as soon as possible
- Pts with mechanism or symptoms concerning for thoracolumbar spine injury, maintain precautions until definitive evaluation (often MRI)
    - Remove backboard as soon as possible; continue log roll precautions
    - Remain flat; reverse Trendelenberg okay if not in spinal shock
- Suspected Acute Spinal shock- presents with acute refractory decrease in systemic vascular resistance & severe hypotension- order peripheral vasoconstricting agents
- Steroid therapy for spinal cord injury - Not recommended/not indicated

Mechanisms to be concerned for:

Children of all ages with a mechanism that put their neck and cervical spine at risk for injury, or cervical spine tenderness, or neurologic deficit should have cervical spine immobilization in place until evaluated.

1. Trauma involving significant force (MVC, falls from height)

2. Acceleration/deceleration events (MVC)

3. Diving accidents (could fall under significant force)

4. High risk sports (football, hockey, horseback riding)

5. Multisystem traumas (could fall under significant force)

B. Similarly, children of all ages with a mechanism that puts their thoracolumbar spine at risk for injury should have thoracolumbar spine precautions implemented until definitive evaluation, usually MRI, has been obtained.

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