

Spinal cord injuries in children are rare but potentially devastating injuries.

Key Points

High index of suspicion of potential spinal cord injury

Transfer children with suspected spinal column and / or cord injuries directly to MTC

Protect the spine when injury is suspected

MRI is recommended mode of 3-dimensional imaging for suspected cervical spine injuries in children

Guideline:

- High index of suspicion of potential spinal cord injury (SCI)
- History and detailed examination
- Immobilise spine
- Immediate transfer to closest MTC (RVI or JCUH)
- Early registration with National Spinal Cord Injury Database and joint management plan with SCI specialist

Spinal injuries should be suspected in any patient who has been subjected to

- A road traffic accident
- A fall from .
- >3x body height
- An accident resulting in high energy impact or crush injuries
- An accident resulting in multiple injuries
- An accident resulting in loss of consciousness

And if:

- Following injury the patient complains of back or neck pain and appears to be guarding their back or neck
- The patient complains of sensory changes
- There is a history of sensory changes, weakness or other signs of spinal injury
- The patient is unable to pass urine

1. If you suspect a spinal injury, implement measures to protect the spine. Use soft collar and/or manual in-line stabilization and/or rolled towels or similar to control neck movements. Rigid immobilization of the neck will risk further harm in a combative child. Method of control depends on size of child and circumstances. Contact neurosurgery registrar.
2. Imaging include:
RCR Guidance on Imaging in Paediatric Trauma
NICE Guideline NG41 'Spinal Injury: assessment and initial management'
Canadian C-Spine rule

Suspected cervical spine injury

- a) use 'Canadian C-Spine Rules' at risk symptoms and signs to guide imaging decision
- b) When immediately available, use MRI as first line imaging where there is a high risk of spinal cord injury and / or positive clinical signs of cervical injury or abnormal neurology. If MRI not immediately available, use CT.
- c) Use XR where the patient does not have a high risk but there are clinical concerns

Suspected isolated thoracic or lumbosacral injury

- a) Use XR as first line investigation if there is a suspected injury without abnormal neurology
- b) Use CT if the XR shows an injury or if there are symptoms or signs of a spinal cord injury
- c) If a new spinal column injury is detected, image the rest of the spine

3. Management:

See Appendix 4 for detailed spinal cord injury management protocol

AUTHOR	Philip Henman
VERSION NUMBER/DATE	1.0 / June 2017
REVIEW DATE	01/06/2019
RELATED INFORMATION	