

19. Blunt cervical spine trauma: pearls of wisdom

Faryal Asmat
Vijay Sawlani

Imaging Department, University Hospitals Birmingham NHS Foundation Trust,
Birmingham

Purpose

1. To understand cervical spine anatomy.
2. To evaluate cervical spine injuries by utilizing commonly used classification system .
3. To diagnose structural and neurological instability and interpret it objectively for surgical intervention.

Methods and Materials

Cervical spine injuries occur in 5 to 10% of patients with blunt poly-trauma. The morbidity and mortality associated with these injuries can be devastating . Most cervical spine injuries occur at two levels, C2 and C6 or C7. Percentage of missed fractures with conventional x-rays is very high, therefore the investigations of choice are MDCT and MRI. The main point to determine in spinal injury is stability ,which affect the decision making process.

Results

Cervical spine has seven vertebrae. For classification of cervical injuries, cervical spine is divided into two regions. First includes craniocervical region, atlas and axis. Second consist of sub-axial region extending from C3-7. In sub-axial region, SLIC(sub axial injury classification) is used. SLIC is a score ,comprising three components:

1. Injury morphology, determined by pattern of spinal column disruption.
2. Integrity of disco-ligamentous complex (DLC).
3. Neurological status of patient.

Conclusions

The assessment of cervical injuries is a race against time because the delay in diagnosis of these injuries, in turn delay the definitive management resulting in poor neurological outcomes. The management of these injuries require a well trained multi-disciplinary team with radiologist having a pivotal role in reducing the time to diagnosis and allowing the team to win this race against time. The SLIC provides a comprehensive classification system for sub-axial cervical trauma.