

Soft tissue injury of the cervical spine

Safe practice trauma guidelines recommend that all blunt trauma patients with a mechanism of injury having the potential to cause cervical spine injury should be immobilized at the scene with a hard collar and this should be continued during transport to emergency care.

Over the past 10 years, two different “decision rules” have been independently developed successfully and trialled in prospective studies to aid clinicians in the selection of patients for cervical spine radiography and more rapidly rule out injury to the cervical spine using clinical assessment.

Both these decision rules relate to AWAKE, ALERT and CO-OPERATIVE patients who are able to participate in a clearance guideline.

The two different ‘decision rules’ are: -

- (1) NEXUS – National Emergency X-radiography Utilisation Study; and
- (2) CCR – The Canadian Cervical Spine rules

(Please see our website for more details about these two sets of rules or algorithms. Also see references below).

If after radiograph examination (including helical CT of the cervical spine), necessary under the decision rules, the cervical spine is “cleared” of any significant bony injury (that is fracture, dislocation or ligamentous injury) the patient may be discharged home if there are no further injuries that need evaluation and treatment.

Hard collars should be used for all immobilization with or without supports until cervical spine injury is excluded either clinically or radiologically.

Soft collars should NEVER be used in cervical spine trauma.

If, in the alert patient, radiographs or CT of the cervical spine show no significant abnormality but pain persists (depending on the location and severity) then delayed flexion/extension films or MRI may assist with the diagnosis.

In the interim period, a hard collar e.g. Philadelphia collar will be necessary until the neck can be comprehensively cleared. If these rules are strictly adhered to and these patients are NOT sent home in a soft collar because they have a “sore neck” it is believed the incidence of non-specific soft tissue sprain of the cervical spine will be minimised.

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1 Hoffman JR, Mower WR, Wolfson AB 'Validity of a set of clinical criteria to rule out injury to the cervical spine in patients with blunt trauma' NEJM 2000; 7: 287-291

2. Stiell G, Wells vGA, Vandeheem K, et al . 'The Canadian C-Spine study for alert and stable trauma patients' JAMA 2001; 286: 1841-8

VSCC Guidelines / Practice Statements are intended to provide some broad statements of principle to facilitate the improvement and safety of surgical practice. They are not legally binding, nor do they provide a comprehensive analysis of every situation.