

Guideline for Cervical Spine Clearance In Trauma

Last updated: 2nd September, 2010.

Definition:

To provide indications for determining if a trauma patient has sustained a cervical spine injury.

Parameters of the Guideline:

All patients who have sustained injuries through the following mechanisms should have a cervical collar placed in the pre-hospital environment if the tactical situation allows:

- Trauma resulting in loss of consciousness or even the question of loss of consciousness due to any form of head injury
- Trauma resulting in temporary amnesia
- Major explosive or blast injury
- Mechanism that produces a violent impact on the head, neck, torso or pelvis
- Mechanism that creates sudden acceleration/ deceleration or lateral bending forces on the neck or torso
- Fall from height (vs. fall from standing)
- Ejection or fall from any motorized vehicle
- Vehicle roll-over
- Any patient complaining of neck pain or displaying neurological impairment following a trauma should have a cervical collar placed.
- Patients with penetrating cervical injury from an explosive mechanism should have a cervical collar placed if possible. When a blunt mechanism is combined with a penetrating injury, the cervical collar is an important protection until unstable spinal injury is ruled out, but all providers must be aware that the collar may hide other injuries and developing pathology such as expanding hematoma.

Definitions of terms:

- GCS – Glasgow Coma Scale
- Significant distracting injury - defined as any injury which is so painful that it may obscure the patient's ability to notice pain in their neck; proximity increases the risk of distraction, and therefore upper extremity and upper torso injuries are more likely to be distracting than lower torso or lower extremity injuries

Background:

The incidence of cervical spine injury in a trauma patient is estimated to be 1% to 3%.¹⁻³ In patients with a major head injury, the incidence of an associated spinal injury increases to 5%, and has been reported to be as high as 10% to 20%.^{4,5} Early recognition and management of cervical spine injuries in the acute trauma patient is necessary to prevent detrimental neurologic outcomes.

Assesment:

1. Referral points from outside Divisional Hospitals (Emergency Departments of Divisional Hospitals inclusive):

Appendix 1

2. Divisional Hospital (Surgical Department) Algorithm:

Appendix 2

Divisional Hospital considerations:

Any patient with a suspected cervical spine injury and a neurologic deficit should have a cervical collar in place, and should be referred immediately for surgical consultation and imaging. There are separate algorithms for reliable and unreliable patients.⁶⁻⁸

Unreliable patients are those who cannot adequately communicate, have a decreased level of consciousness (GCS<15), or have a significant distracting injury.

The treating physician / surgeon has final say in determining a certain injury is distracting enough to render a patient unreliable and require clearance via the unreliable patient algorithm. If uncertain, err on the side of caution and consider the injury distracting and proceed accordingly.⁹⁻¹²

Investigations / other Issues:

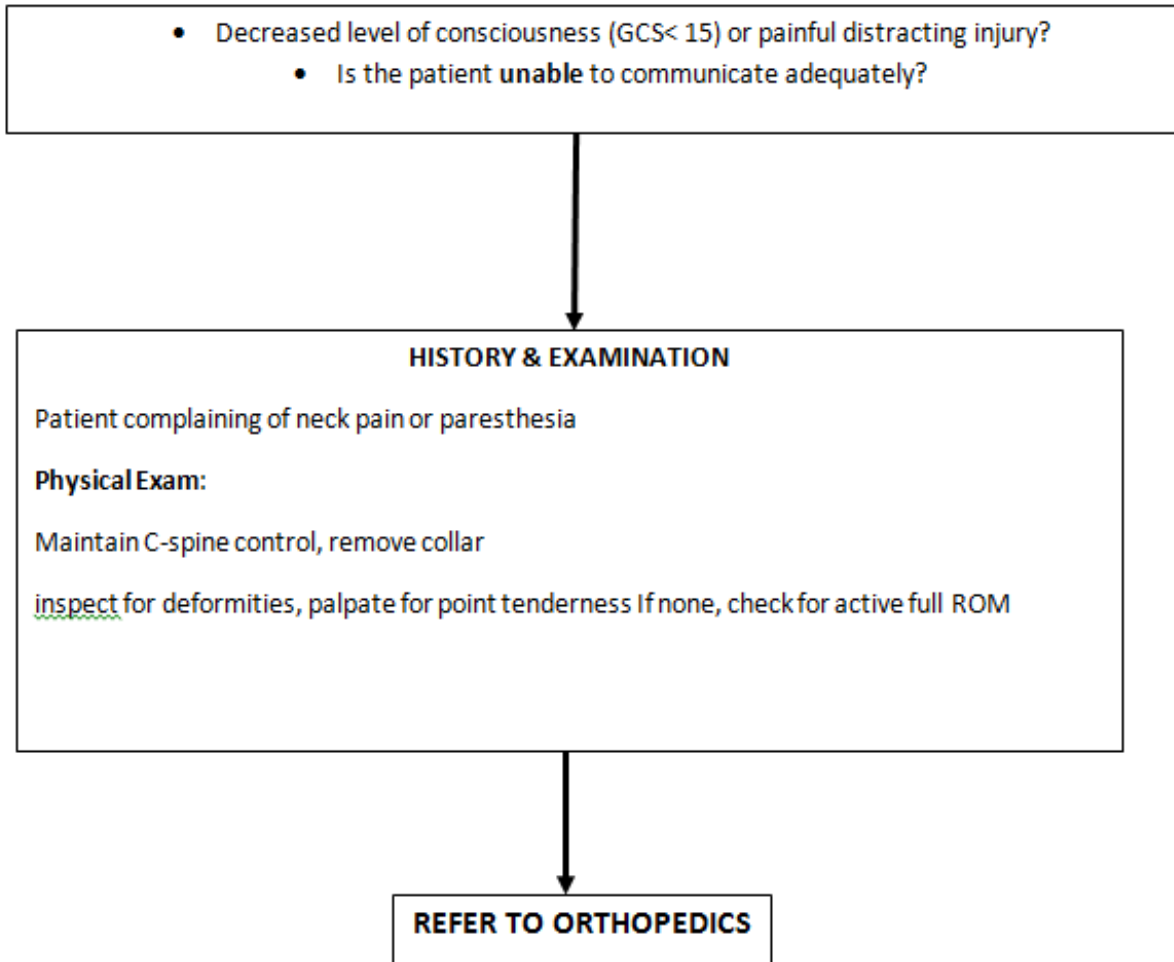
Covered with Algorithms

References:

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ALGORITHM FOR SUSPECTED CERVICAL SPINE IN TRAUMA

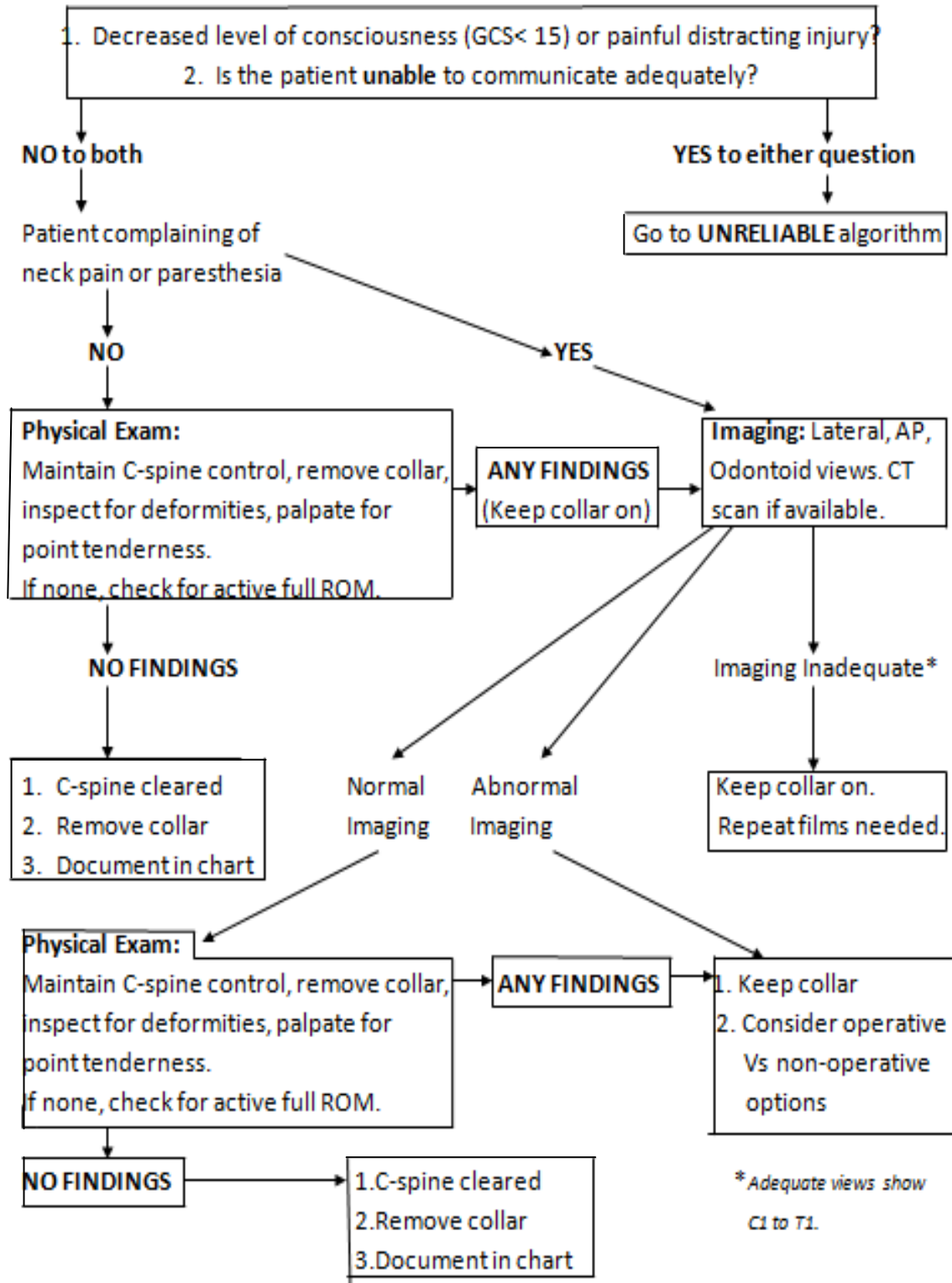
Cervical collar to remain in place until cervical spine injury excluded



APPENDIX 2

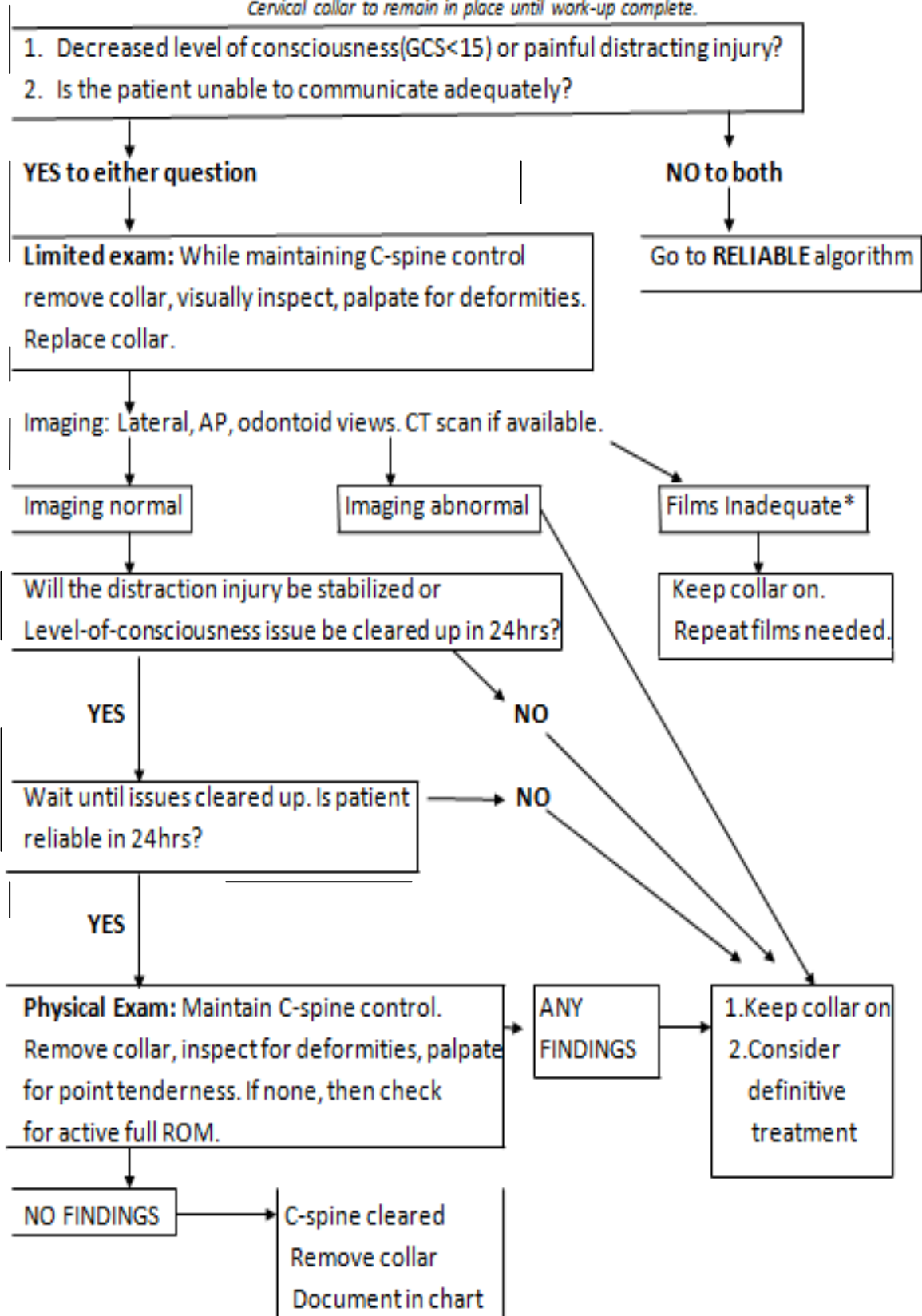
RELIABLE PATIENT WITH NO NEUROLOGICAL DEFICIT

Cervical collar to remain in place until work-up complete.



CERVICAL SPINE CLEARANCE ALGORITHM- UNRELIABLE PATIENT

Cervical collar to remain in place until work-up complete.



*Adequate views show C1 to T1

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Further Information	Surgical CSN Chairperson

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