

Guideline



CCHMC Trauma Services Guidelines

Title: Cervical Spine Clearance: Unreliable Patient

Effective Date: 12/2024

Number: TR-06

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1.0 SCOPE

- 1.1. Care of the Trauma Services Patient at CCHMC.

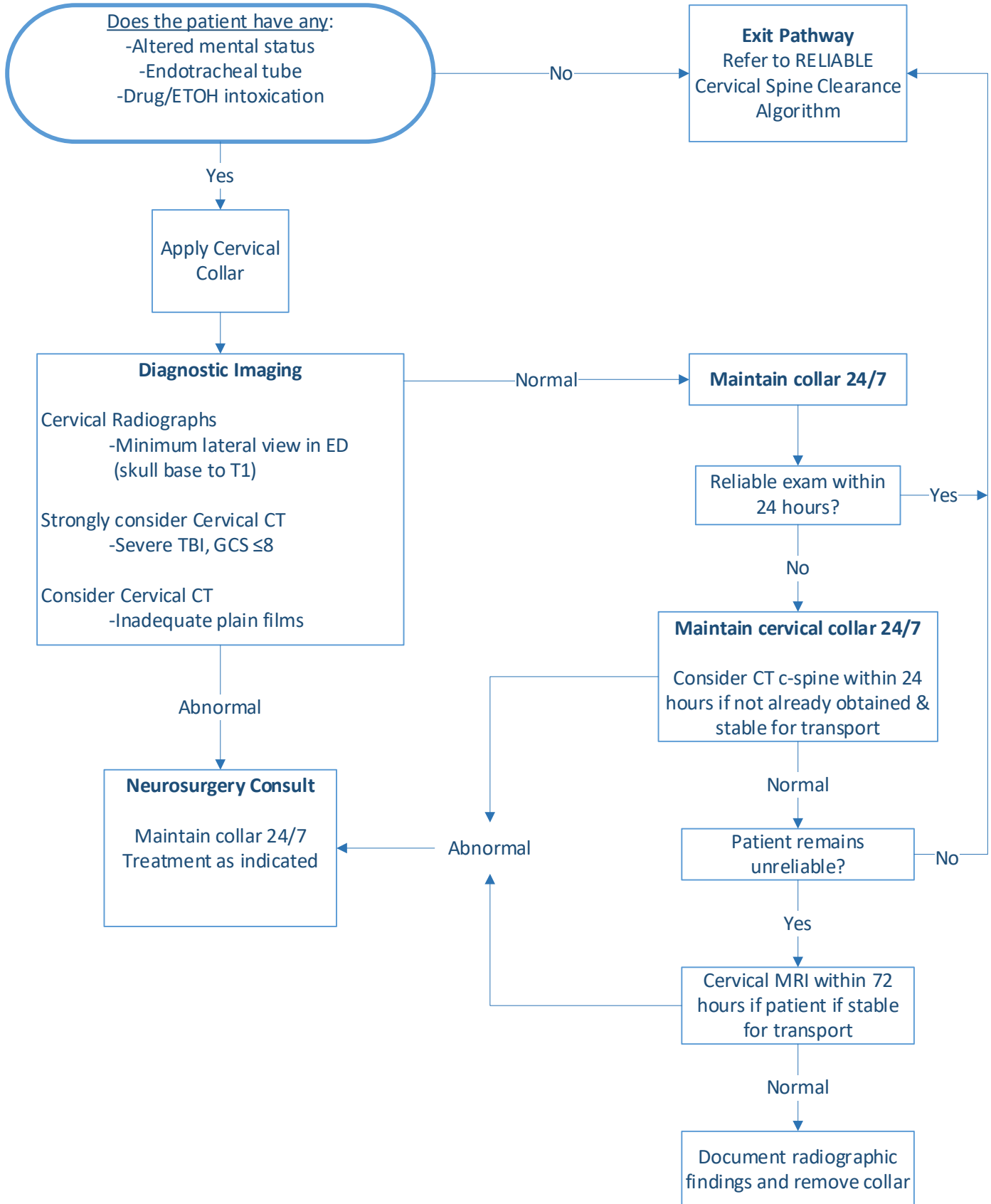
2.0 DEFINITIONS

- 2.1. **Unreliable Exam:** A patient who meets any of the following criteria cannot undergo clinical clearance of the cervical spine:
 - 2.1.1. Altered mental status
 - 2.1.2. Intubated patient
 - 2.1.3. ETOH/Drug intoxication
- 2.2. **Clinical clearance** of the cervical spine may be performed if ALL of the following criteria are present:
 - 2.2.1. Normal neurologic exam; and
 - 2.2.2. No tenderness to palpation of the cervical spine; and
 - 2.2.3. No cervical spine pain with active range of motion; and
 - 2.2.4. No distracting injuries

3.0 GUIDELINE

- 3.1. Complete primary and secondary surveys per CCHMC guidelines
- 3.2. If patient is found to be unreliable:
 - 3.2.1. Cervical collar should be placed
 - 3.2.2. C-spine radiographs should be obtained in the ED (minimum: cross table/lateral)
- 3.3. Cervical spine radiographs are abnormal:
 - 3.3.1. Maintain cervical collar
 - 3.3.2. Obtain neurosurgical consult
 - 3.3.3. Treatment as indicated
- 3.4. Cervical spine radiographs are normal, and:
 - 3.4.1. Reliable exam
 - a. Exit pathway; refer to reliable c-spine algorithm
 - 3.4.2. Remains unreliable
 - a. Maintain cervical collar
 - b. Strongly consider CT cervical spine (skull base through T1) within 24 hours (for severe TBI GCS <8)
- 3.5. Cervical CT abnormal:
 - 3.5.1. Maintain cervical collar
 - 3.5.2. Obtain neurosurgical consult
 - 3.5.3. Treatment as indicated
- 3.6. Cervical spine CT normal:
 - 3.6.1. Patient now reliable
 - a. Exit pathway
 - b. Refer to reliable c-spine algorithm
 - 3.6.2. Patient remains unreliable:
 - a. Maintain cervical collar
 - b. MRI cervical spine within 72 hours when stable for transport
- 3.7. Cervical spine MRI normal:
 - 3.7.1. Document radiographic findings
 - 3.7.2. Remove cervical collar
- 3.8. Cervical spine MRI abnormal:
 - 3.8.1. Maintain cervical collar
 - 3.8.2. Obtain neurosurgical consult
 - 3.8.3. Treatment as indicated

Cervical Spine Clearance UNRELIABLE Exam Algorithm



4.0 REFERENCES

4.1. American College of Surgeons Committee on Trauma. (2012). Spine and spinal cord trauma. In *Advanced trauma life support: Student course manual*, (9th ed. (p. 185-189). Chicago: IL.

4.2. Como, JJ, Diaz, JJ, Dunham, CM, Chiu, WC, Duane, TM, Capella, JM, Holevar, MR, Khwaja, KA, Mayglothing, JA, Sharior, MB, & Winston, ES. (2009). EAST guideline: Identification of cervical spine injuries. *Journal of Trauma*, 67(3), 651-59.

4.3. Rozzelle, CJ, Arabi, B, Dhali, SS, Gelb, DE, Hurlbert, RJ, Ryken, TC, Theodore, N, Walters, BC, & Hadley, MN. (2013). Management of pediatric cervical spine and spinal cord injuries. *Neurosurgery supplement*, 72(3), 205-226.

4.4. Ryken, TC, Hadley, MN, Walters, BC, Aarabi, B, Dhali, SS, Gelb, DE, Hurlbert, RJ, Rozzelle, CJ, & Theodore, N. (2013). Radiographic assessment. *Neurosurgery supplement*, 72(3), 54-72.

4.5. Herman, M. J., Brown, K. O., Sponseller, P. D., Phillips, J. H., Petrucelli, P. M., Parikh, D. J., ... & Anderson, R. C. (2019). Pediatric Cervical Spine Clearance: A Consensus Statement and Algorithm from the Pediatric Cervical Spine Clearance Working Group. *JBJS*, 101(1), e1.

4.6 Laughlin, Cory, M. (12/29). Cervical Spine Clearance in the Pediatric Trauma Patient. *Current Treatment Options in Pediatrics* ((2198-6088), 5 (4), p. 483

4.7 Pennell, C., Gupta, J., March, M., Arthur, L.G., Lindholm, E., Herman, M., Grewal, H. (2020). A Standardized protocol for cervical spine evaluation in the children reduces imaging utilization: a pilot study of the pediatric cervical spine clearance working group protocol. *J Pediatr Orthop*, 40 (8),e780-e784

5.0 APPROVALS

All revisions of this guideline are approved by the Trauma Service Department. This guideline is reviewed every three years or sooner if deemed necessary. Authority for this document resides with the Trauma Service Department. This guideline is approved by the Trauma Services Manager and the Director of Trauma Services.

HISTORY	
Original Date	8/7/2006
Revision Date	11/10, 10/13, 05/15, 06/18, 01/19, 12/24
Review Date	2/22