

Rigid cervical collar is universally used for immobilisation of **cervical spine** in trauma patients. Application of cervical collars may reduce cervical spine movements but render tracheal intubation with a standard laryngoscope difficult.

Tracheal intubation using Airtraq(®) in the presence of rigid cervical collar has equivalent success rate, acceptable difficulty in insertion and mild increase in **intubation difficulty score (IDS)** ¹⁾.

There is a lack of high-level evidence on the effect of prehospital cervical spine immobilisation on patient outcomes. There is a clear need for large prospective studies to determine the clinical benefit of prehospital spinal immobilisation as well as to identify the subgroup of patients most likely to benefit ²⁾.

A cervical collar and full spinal precautions (log-roll, flat, holding C-spine) should be maintained until the spinal column has been fully evaluated by a spine surgeon.

In obtunded adult blunt trauma patients, Patel et al. conditionally recommend cervical collar removal after a negative high-quality C-spine CT scan result alone ³⁾.

Most cases of traumatic spondylolisthesis of the axis (hangman's fracture) can be treated nonoperatively with reduction and subsequent immobilization in a rigid cervical collar or halo.

Types

A soft collar is fairly flexible and is the least limiting but can carry a high risk of further breakage, especially in people with osteoporosis. It can be used for minor injuries or after healing has allowed the neck to become more stable.

A range of manufactured rigid collars are also used, usually comprising (a) a firm plastic bi-valved shell secured with Velcro straps and (b) removable padded liners. The most frequently prescribed are the

Semirigid Aspen collar, Malibu, Miami J, and **Philadelphia collars**. All these can be used with additional chest and head extension pieces to increase stability.

Cervical collars are incorporated into rigid braces that constrain the head and chest together.

Examples include the Sterno-Occipital Mandibular Immobilization Device (SOMI), Lerman Minerva and Yale types. Special cases, such as very young children or non-cooperative adults, are sometimes still immobilized in medical plaster of paris casts, such as the Minerva cast.

¹⁾

Durga P, Yendrapati C, Kaniti G, Padhy N, Anne KK, Ramachandran G. Effect of rigid cervical collar on tracheal intubation using Airtraq(®). Indian J Anaesth. 2014 Jul;58(4):416-22. doi: 10.4103/0019-5049.138976. PubMed PMID: 25197109; PubMed Central PMCID: PMC4155286.

²⁾

Oteir AO, Smith K, Stoelwinder JU, Middleton J, Jennings PA. Should suspected cervical spinal cord injury be immobilised?: A systematic review. Injury. 2015 Jan 12. pii: S0020-1383(15)00003-0. doi: 10.1016/j.injury.2014.12.032. [Epub ahead of print] Review. PubMed PMID: 25624270.

³⁾

Patel MB, Humble SS, Cullinane DC, Day MA, Jawa RS, Devin CJ, Delozier MS, Smith LM, Smith MA, Capella JM, Long AM, Cheng JS, Leath TC, Falck-Ytter Y, Haut ER, Como JJ. Cervical spine collar clearance in the obtunded adult blunt trauma patient: A systematic review and practice management

guideline from the Eastern Association for the Surgery of Trauma. J Trauma Acute Care Surg. 2015 Feb;78(2):430-441. PubMed PMID: 25757133.

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