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Immobilisation axiale

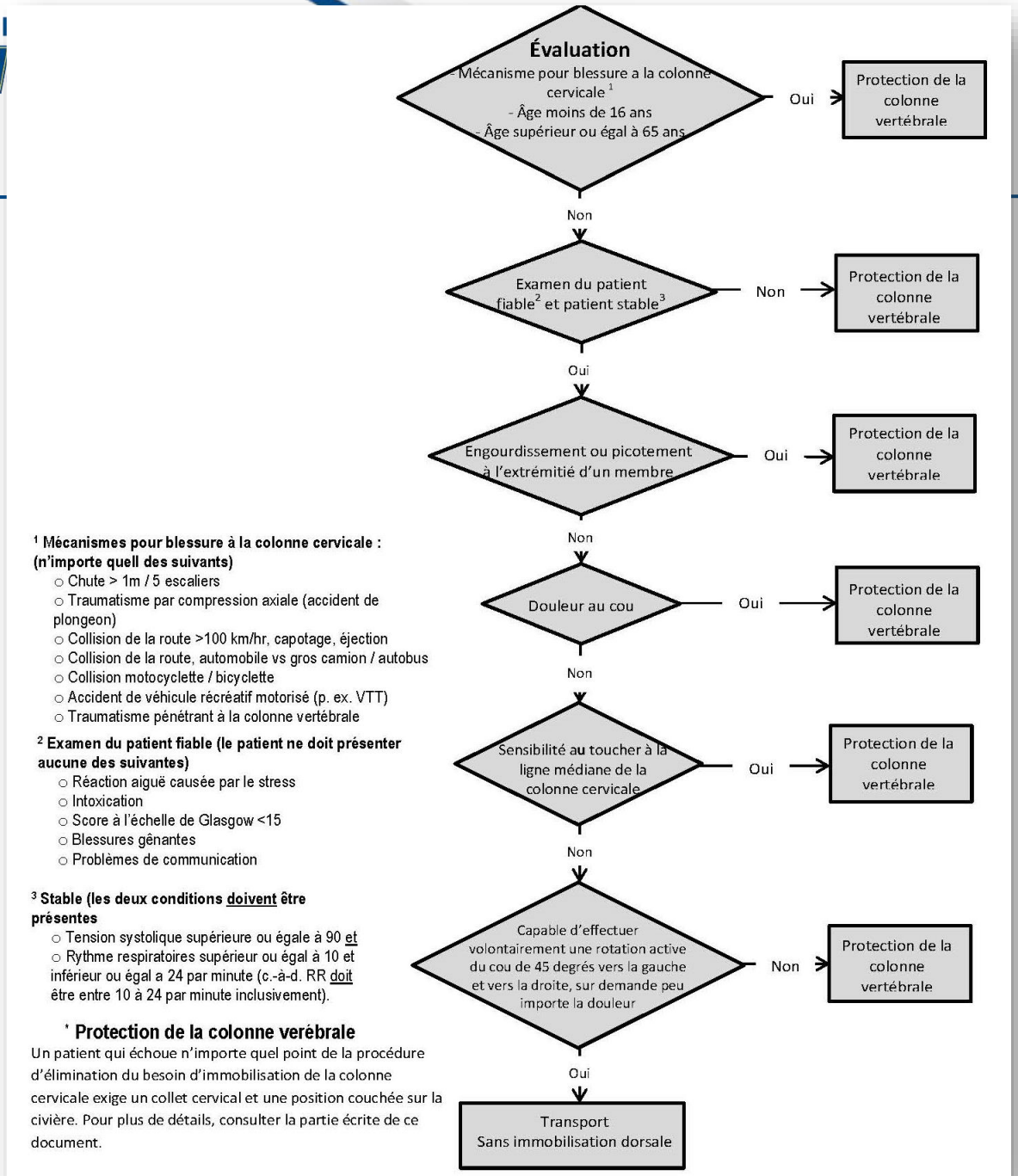
Formation paramédicale en soins primaires

Module:08
Section:03

Gestion

- Alignement de la colonne vertébrale
- Immobilisation cervicale manuelle
- Collier cervical
- Immobilisation et mouvement

Évaluation de la colonne cervicale



[1] Mécanismes pour blessure à la colonne cervicale : (n'importe quell des suivants)

- Chute > 1m / 5 escaliers
- Traumatisme par compression axiale (accident de plongeon)
- Collision de la route >100 km/hr, capotage, éjection
- Collision de la route, automobile vs gros camion / autobus
- Collision motocyclette / bicyclette
- Accident de véhicule récréatif motorisé (p. ex. VTT)
- Traumatisme pénétrant à la colonne vertébrale

[2] Examen du patient fiable (le patient ne doit présenter aucune des suivantes)

- Réaction aiguë causée par le stress
- Intoxication
- Score à l'échelle de Glasgow <15
- Blessures gênantes
- Problèmes de communication

[3] Stable (les deux conditions doivent être présentes

- Tension systolique supérieure ou égale à 90 et
- Rythme respiratoires supérieur ou égal à 10 et inférieur ou égal a 24 par minute (c.-à-d. RR doit être entre 10 à 24 par minute inclusivement).

*** Protection de la colonne verébrale**

Un patient qui échoue n'importe quel point de la procédure d'élimination du besoin d'immobilisation de la colonne cervicale exige un collet cervical et une position couchée sur la civière. Pour plus de détails, consulter la partie écrite de ce document.

Alignement de la colonne vertébrale

- Placer le patient dans une position neutre, la tête alignée avec le corps
  - Position de fonction
  - Hanches et genoux légèrement fléchis
  - Couverture roulée sous les genoux
- Toujours soutenir la tête et le cou

Alignement de la colonne vertébrale

- Contre-indications à la position neutre
  - Augmentation de la douleur au mouvement
  - Résistance perceptible durant la manipulation
  - Augmentation des déficits neurologiques au mouvement
  - Déformation apparente de la colonne vertébrale
- Il est toujours préférable de réduire les déplacements du patient au minimum.

Immobilisation cervicale manuelle

- Patient assis
  - Approcher le patient de face
  - Demander à un soignant d'exercer une légère traction manuelle
    - Diminution de la charge axiale
  - Évaluer la partie postérieure de la moelle épinière
  - Placer lentement la tête du patient en position neutre, alignée avec le corps
- Patient couché sur le dos
  - Demander à un soignant d'exercer une légère traction
  - Adulte
    - Surélever la tête de 2,5 à 5 cm (1 à 2 po) du sol et la maintenir en position neutre, alignée avec le corps
  - Enfant
    - Garder la tête au niveau du sol et éviter toute flexion

Collier cervical

- Placer le collier le plus tôt possible
- Examiner le cou du patient au préalable
- Le collier limite certains mouvements et réduit la charge axiale.
- Il n’immobilise pas complètement le cou.

Collier cervical

- Régler la grandeur du collier cervical et le placer selon les recommandations du fabricant
  - Régler le collier avant de le mettre au patient
  - Le collier doit être bien ajusté.
  - Il ne doit pas gêner la respiration.
  - La tête doit demeurer en position neutre.

- Maintenir l'immobilisation cervicale manuelle jusqu'à la mise en place du collier cervical

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Collier cervical

Retrait du casque

- Indications
  - Le casque n’immobilise pas la tête du patient.
  - On ne peut immobiliser adéquatement le casque sur une planche dorsale.
  - Le casque empêche de prodiguer des soins respiratoires.
  - Il empêche d’examiner les blessures anticipées et les troubles respiratoires manifestes ou anticipés.
  - Le retrait du casque ne causera pas de blessures supplémentaires.

Retrait du casque

- La manœuvre nécessite au moins deux travailleurs paramédicaux.
  - Élaborer un plan et communiquer avec ses partenaires
  - Enlever la visière et détacher la mentonnière
  - Immobiliser la tête
    - Glisser une main sous la nuque et la tête
    - De l'autre main, soutenir la partie antérieure du cou et la mâchoire
  - Retirer le casque
    - Bouger légèrement la tête pour dégager la région occipitale
    - Chaque manœuvre doit être lente et contrôlée.
  - Transporter le casque avec le patient

Retrait du casque

FIGURE 24-12 Retrait du casque

Retrait des casques de sport

- Doit retirer le casque ET les protections
- Ou enlever le casque mais fournir un rembourrage (par exemple une serviette pliée) sous la tête du patient.

Mouvement

- Coordonner chaque mouvement
  - Rythme en quatre temps
- Déplacer le patient d'un bloc
  - Éviter les poussées latérales
  - Bouger le patient vers le haut et vers le bas pour éviter toute flexion latérale
- Le travailleur paramédical à la tête commande chaque mouvement.
- Chaque manœuvre doit être lente et bien contrôlée.
- Visualiser la position finale du patient avant d'amorcer chaque déplacement.

Types de mouvements

- Déplacement en bloc
- Relevage par pont néerlandais
- « Rope-sling slide »
- Civière de relevage à lames
- Attelle d’extraction
- Désincarcération rapide
- Position finale du patient
- Planche dorsale longue
- Immobilisation des blessures par plongeon

Déplacement en bloc à quatre personnes

Immobilisation

- Immobilisation d’un blessé médullaire sur une planche dorsale longue avec un dispositif d’immobilisation cervicale

Immobilisation

- Faire rouler le patient de la position couchée ou allongée à la position sur la planche
- Vérifier le dos-Appliquer le collier cervical si ce n'est pas déjà fait
- Sécuriser le torse
- Sécuriser le bassin
- Sécuriser les jambes
- Sécuriser la tête

- *Coussin entre les jambes et sous les parties creuses si possible*.

Application de l'étireur de cuillère

Changements au sein de l’industrie

- Les civières cuillères peuvent être utiles sur le terrain et à l’hôpital.

Réglage de la longueur

- Déverrouiller le levier situé de chaque côté du cadre
- Tirer sur la section réservée aux pieds jusqu'à la longueur désirée
- Verrouiller les leviers
- Pousser ou tirer la section réservée aux pieds jusqu'à ce qu'elle s'enclenche

Séparation de la civière cuillère

- Séparer les deux sections de la civière
- Placer les deux moitiés de chaque côté du patient
- Aligner les parties droite et gauche des pièces de jumelage à la tête et au pied de la civière; pousser jusqu'à l'enclenchement du système de verrouillage Twin Safety Locks®
- Sécuriser le patient avec des sangles avant de le soulever

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Attelle d'extraction de Kendrick (dispositif d'immobilisation)

Attelle d’extraction de Kendrick (dispositif d’immobilisation)

- L’attelle d’extraction sert à pivoter le patient, et non à le soulever.

Rapid Extrication

- Désincarcération rapide d'un blessé médullaire
  - Appliquer le collier si les conditions le permettent
  - Tourner le patient de 90°
  - Glisser la planche sous les fesses
  - Glisser le patient sur la planche
  - Fixer le patient à la planche

Pediatric Immobilization

- Pedi-Pac® est un système de retenue et d'immobilisation de la colonne vertébrale conçu pour les enfants mesurant entre 71 cm et 137 cm (28 à 54 po) et pesant entre 9 et 41 kg.

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Immobilisation chez l’enfant

- Les boucles d’attache intégrées permettent de fixer le système aux sangles de lit existantes pour assurer une sécurité maximale pendant le transport.
- Les sangles de retenue individuelles permettent d’immobiliser une jambe pendant que le travailleur paramédical s’occupe de l’autre jambe.
- Support de tête réglable avec ouvertures pour les oreilles afin de surveiller le drainage des liquides.
- Sangles remplaçables de couleur pour une identification facile.
- Le système est fourni avec des courroies de tête et de menton ainsi qu’un étui de transport.
- Les poignées de levée cousues aux deux extrémités facilitent la manipulation dans les endroits restreints.

Immobilisation chez l’enfant

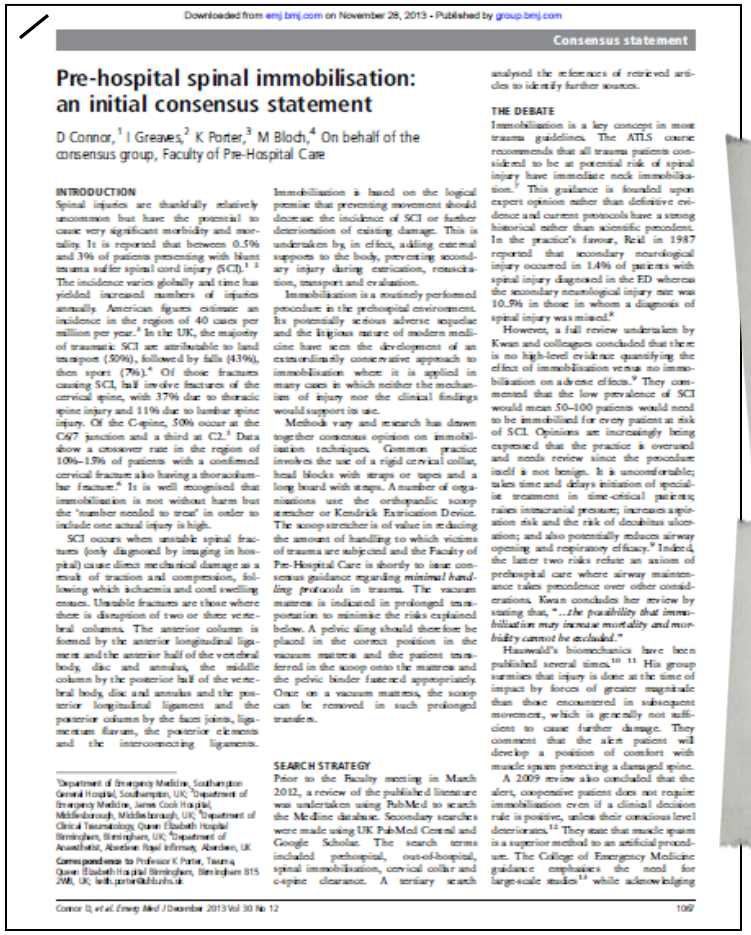
Immobilisation vertébrale dans l'eau

- Ne doit être effectué que par des sauveteurs formés et disposant d'un équipement approprié.

Émergence d’un consensus

Les données probantes récentes ont remis en question les méthodes utilisées de longue date pour traiter les traumatismes potentiels de la moelle épinière.

Émergence d'un consensus



Consensus statement

Pre-hospital spinal immobilisation: an initial consensus statement

D Connor,[1] I Greaves,[2] K Porter,[3] M Bloch,[4] On behalf of the consensus group, Faculty of Pre-Hospital Care

INTRODUCTION

Spinal injuries are thankfully relatively uncommon but have the potential to cause very significant morbidity and mortality. It is reported that between 0.5% and 3% of patients presenting with blunt trauma suffer spinal cord injury (SCI).[1 2] The incidence varies globally and time has yielded increased numbers of injuries annually. American figures estimate an incidence in the region of 40 cases per million per year.[3] In the UK, the majority of traumatic SCI are attributable to land transport (50%), followed by falls (43%), then sport (7%).[4] Of those fractures causing SCI, half involve fractures of the cervical spine, with 37% due to thoracic spine injury and 11% due to lumbar spine injury. Of the C-spine, 50% occur at the C6/7 junction and a third at C2.[3] Data show a crossover rate in the region of 10%–15% of patients with a confirmed cervical fracture also having a thoracolumbar fracture.[5] It is well recognised that immobilisation is not without harm but the 'number needed to treat' in order to include one actual injury is high.

SCI occurs when unstable spinal fractures (only diagnosed by imaging in hospital) cause direct mechanical damage as a result of traction and compression, following which ischaemia and cord swelling ensues. Unstable fractures are those where there is disruption of two or three vertebral columns. The anterior column is formed by the anterior longitudinal ligament and the anterior half of the vertebral body, disc and annulus, the middle column by the posterior half of the vertebral body, disc and annulus and the posterior longitudinal ligament and the posterior column by the facet joints, ligamentum flavum, the posterior elements and the interconnecting ligaments.

Immobilisation is based on the logical premise that preventing movement should decrease the incidence of SCI or further deterioration of existing damage. This is undertaken by, in effect, adding external supports to the body, preventing secondary injury during extrication, resuscitation, transport and evaluation.

Immobilisation is a routinely performed procedure in the prehospital environment. Its potentially serious adverse sequelae and the litigious nature of modern medicine have seen the development of an extraordinarily conservative approach to immobilisation where it is applied in many cases in which neither the mechanism of injury nor the clinical findings would support its use.

Methods vary and research has drawn together consensus opinion on immobilisation techniques. Common practice involves the use of a rigid cervical collar, head blocks with straps or tapes and a long board with straps. A number of organisations use the orthopaedic scoop stretcher or Kendrick Extrication Device. The scoop stretcher is of value in reducing the amount of handling to which victims of trauma are subjected and the Faculty of Pre-Hospital Care is shortly to issue consensus guidance regarding *minimal handling protocols* in trauma. The vacuum mattress is indicated in prolonged transportation to minimise the risks explained below. A pelvic sling should therefore be placed in the correct position in the vacuum mattress and the patient transferred in the scoop onto the mattress and the pelvic binder fastened appropriately. Once on a vacuum mattress, the scoop can be removed in such prolonged transfers.

SEARCH STRATEGY

Prior to the Faculty meeting in March 2012, a review of the published literature was undertaken using PubMed to search the Medline database. Secondary searches were made using UK PubMed Central and Google Scholar. The search terms included prehospital, out-of-hospital, spinal immobilisation, cervical collar and c-spine clearance. A tertiary search analysed the references of retrieved articles to identify further sources.

THE DEBATE

Immobilisation is a key concept in most trauma guidelines. The ATLS course recommends that all trauma patients considered to be at potential risk of spinal injury have immediate neck immobilisation.[7] This guidance is founded upon expert opinion rather than definitive evidence and current protocols have a strong historical rather than scientific precedent. In the practice's favour, Reid in 1987 reported that secondary neurological injury occurred in 1.4% of patients with spinal injury diagnosed in the ED whereas the secondary neurological injury rate was 10.5% in those in whom a diagnosis of spinal injury was missed.[8]

However, a full review undertaken by Kwan and colleagues concluded that there is no high-level evidence quantifying the effect of immobilisation versus no immobilisation on adverse effects.[9] They commented that the low prevalence of SCI would mean 50–100 patients would need to be immobilised for every patient at risk of SCI. Opinions are increasingly being expressed that the practice is overused and needs review since the procedure itself is not benign. It is uncomfortable; takes time and delays initiation of specialist treatment in time-critical patients; raises intracranial pressure; increases aspiration risk and the risk of decubitus ulceration; and also potentially reduces airway opening and respiratory efficacy.[9] Indeed, the latter two risks refute an axiom of prehospital care where airway maintenance takes precedence over other considerations. Kwan concludes her review by stating that, "*...the possibility that immobilisation may increase mortality and morbidity cannot be excluded.*"

Hauswald's biomechanics have been published several times.[10 11] His group surmises that injury is done at the time of impact by forces of greater magnitude than those encountered in subsequent movement, which is generally not sufficient to cause further damage. They comment that the alert patient will develop a position of comfort with muscle spasm protecting a damaged spine.

A 2009 review also concluded that the alert, cooperative patient does not require immobilisation even if a clinical decision rule is positive, unless their conscious level deteriorates.[12] They state that muscle spasm is a superior method to an artificial procedure. The College of Emergency Medicine guidance emphasises the need for large-scale studies[13] while acknowledging

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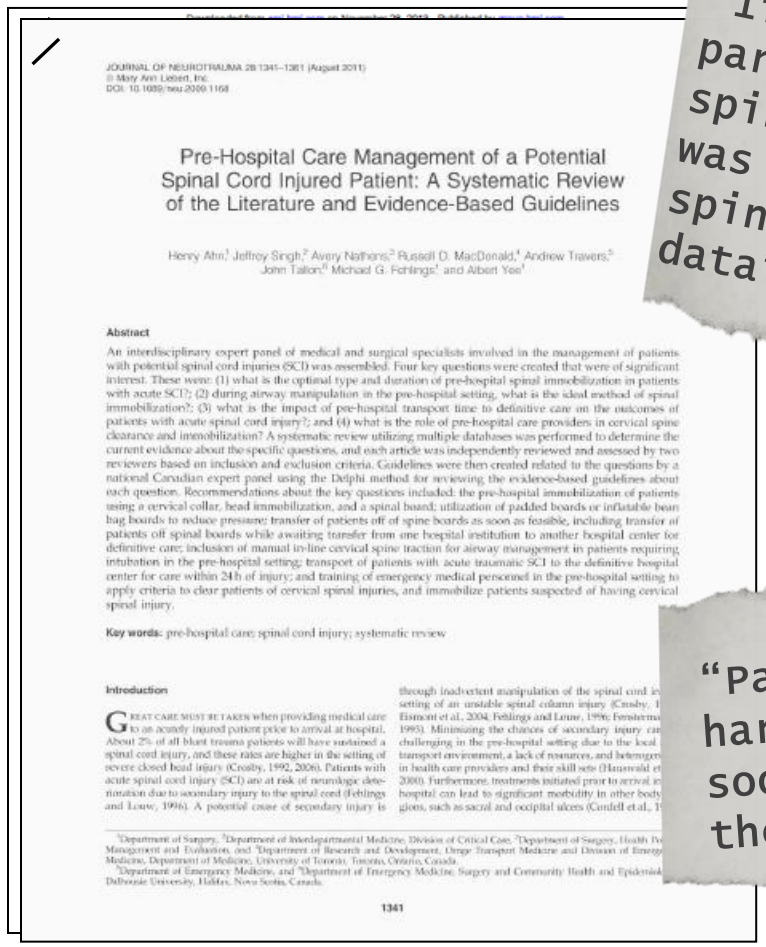
"Opinions are increasingly being expressed that the practice is overused and needs review since the procedure itself is not benign" (Connor et al., 2013).

"Validation of the Canadian C-Spine Rule in the prehospital setting has been undertaken and its reliability proven. Qualitative studies have shown that paramedics are comfortable using it" (Connor et al., 2013).

Émergence d'un consensus



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Pre-Hospital Care Management of a Potential Spinal Cord Injured Patient: A Systematic Review of the Literature and Evidence-Based Guidelines

Henry Ahn,[1] Jeffrey Singh,[2] Avery Nathens,[3] Russell D. MacDonald,[4] Andrew Travers,[5] John Tallon,[6] Michael G. Fehlings,[1] and Albert Yee[1]

Abstract

An interdisciplinary expert panel of medical and surgical specialists involved in the management of patients with potential spinal cord injuries (SCI) was assembled. Four key questions were created that were of significant interest. These were: (1) what is the optimal type and duration of pre-hospital spinal immobilization in patients with acute SCI?; (2) during airway manipulation in the pre-hospital setting, what is the ideal method of spinal immobilization?; (3) what is the impact of pre-hospital transport time to definitive care on the outcomes of patients with acute spinal cord injury?; and (4) what is the role of pre-hospital care providers in cervical spine clearance and immobilization? A systematic review utilizing multiple databases was performed to determine the current evidence about the specific questions, and each article was independently reviewed and assessed by two reviewers based on inclusion and exclusion criteria. Guidelines were then created related to the questions by a national Canadian expert panel using the Delphi method for reviewing the evidence-based guidelines about each question. Recommendations about the key questions included: the pre-hospital immobilization of patients using a cervical collar, head immobilization, and a spinal board; utilization of padded boards or inflatable bean bag boards to reduce pressure; transfer of patients off of spine boards as soon as feasible, including transfer of patients off spinal boards while awaiting transfer from one hospital institution to another hospital center for definitive care; inclusion of manual in-line cervical spine traction for airway management in patients requiring intubation in the pre-hospital setting; transport of patients with acute traumatic SCI to the definitive hospital center for care within 24 h of injury; and training of emergency medical personnel in the pre-hospital setting to apply criteria to clear patients of cervical spinal injuries, and immobilize patients suspected of having cervical spinal injury.

Key words: pre-hospital care; spinal cord injury; systematic review

Introduction

GREAT CARE MUST BE TAKEN when providing medical care to an acutely injured patient prior to arrival at hospital. About 2% of all blunt trauma patients will have sustained a spinal cord injury, and these rates are higher in the setting of severe closed head injury (Crosby, 1992, 2006). Patients with acute spinal cord injury (SCI) are at risk of neurologic deterioration due to secondary injury to the spinal cord (Fehlings and Louw, 1996). A potential cause of secondary injury is through inadvertent manipulation of the spinal cord in setting of an unstable spinal column injury (Crosby, 1 Eismont et al., 2004; Fehlings and Louw, 1996; Fernstrom 1993). Minimizing the chances of secondary injury ca challenging in the pre-hospital setting due to the local transport environment, a lack of resources, and heterogen in health care providers and their skill sets (Hauswald et 2000). Furthermore, treatments initiated prior to arrival i hospital can lead to significant morbidity in other body gions, such as sacral and occipital ulcers (Cordell et al., 1

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[5]Department of Emergency Medicine, and [6]Department of Emergency Medicine, Surgery and Community Health and Epidemiol Dalhousie University, Halifax, Nova Scotia, Canada.

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"If patients met all the criteria, paramedics could transport them without spinal immobilization. They found that there was a 33% reduction in the utilization of spinal immobilization compared to pre-study data" (Muhr et al., 1999).

"Patients should be transferred off the hardboard on admission to a facility as soon as is feasible to minimize time on the hardboard" (Ahn et al., 2009).

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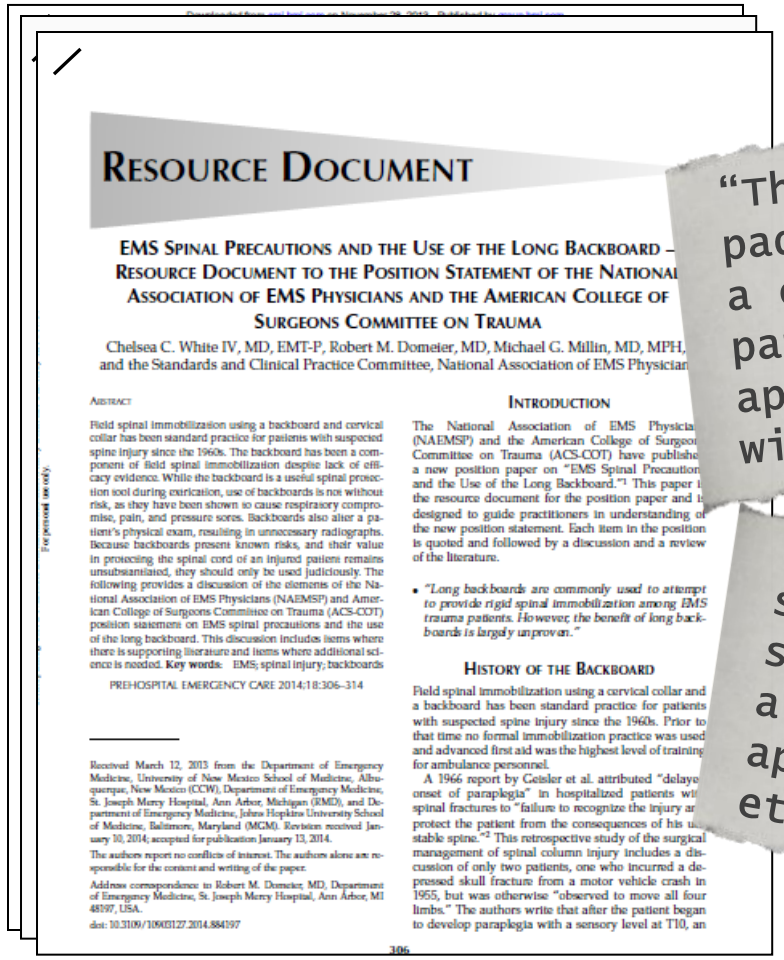
Émergence d'un consensus



RESOURCE DOCUMENT

EMS SPINAL PRECAUTIONS AND THE USE OF THE LONG BACKBOARD – RESOURCE DOCUMENT TO THE POSITION STATEMENT OF THE NATIONAL ASSOCIATION OF EMS PHYSICIANS AND THE AMERICAN COLLEGE OF SURGEONS COMMITTEE ON TRAUMA

Chelsea C. White IV, MD, EMT-P, Robert M. Domeier, MD, Michael G. Millin, MD, MPH, and the Standards and Clinical Practice Committee, National Association of EMS Physician

ABSTRACT

Field spinal immobilization using a backboard and cervical collar has been standard practice for patients with suspected spine injury since the 1960s. The backboard has been a component of field spinal immobilization despite lack of efficacy evidence. While the backboard is a useful spinal protection tool during extrication, use of backboards is not without risk, as they have been shown to cause respiratory compromise, pain, and pressure sores. Backboards also alter a patient's physical exam, resulting in unnecessary radiographs. Because backboards present known risks, and their value in protecting the spinal cord of an injured patient remains unsubstantiated, they should only be used judiciously. The following provides a discussion of the elements of the National Association of EMS Physicians (NAEMSP) and American College of Surgeons Committee on Trauma (ACS-COT) position statements on EMS spinal precautions and the use of the long backboard. This discussion includes items where there is supporting literature and items where additional science is needed. **Key words:** EMS; spinal injury; backboards

PREHOSPITAL EMERGENCY CARE 2014;18:306–314

INTRODUCTION

The National Association of EMS Physicians (NAEMSP) and the American College of Surgeons Committee on Trauma (ACS-COT) have published a new position paper on "EMS Spinal Precautions and the Use of the Long Backboard."[1] This paper is the resource document for the position paper and is designed to guide practitioners in understanding of the new position statement. Each item in the position is quoted and followed by a discussion and a review of the literature.

- *"Long backboards are commonly used to attempt to provide rigid spinal immobilization among EMS trauma patients. However, the benefit of long backboards is largely unproven."*

HISTORY OF THE BACKBOARD

Field spinal immobilization using a cervical collar and a backboard has been standard practice for patients with suspected spine injury since the 1960s. Prior to that time no formal immobilization practice was used and advanced first aid was the highest level of training for ambulance personnel.

A 1966 report by Geisler et al. attributed "delayed onset of paraplegia" in hospitalized patients with spinal fractures to "failure to recognize the injury and protect the patient from the consequences of his unstable spine."[2] This retrospective study of the surgical management of spinal column injury includes a discussion of only two patients, one who incurred a depressed skull fracture from a motor vehicle crash in 1955, but was otherwise "observed to move all four limbs." The authors write that after the patient began to develop paraplegia with a sensory level at T10, an

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The authors report no conflicts of interest. The authors alone are responsible for the content and writing of the paper.

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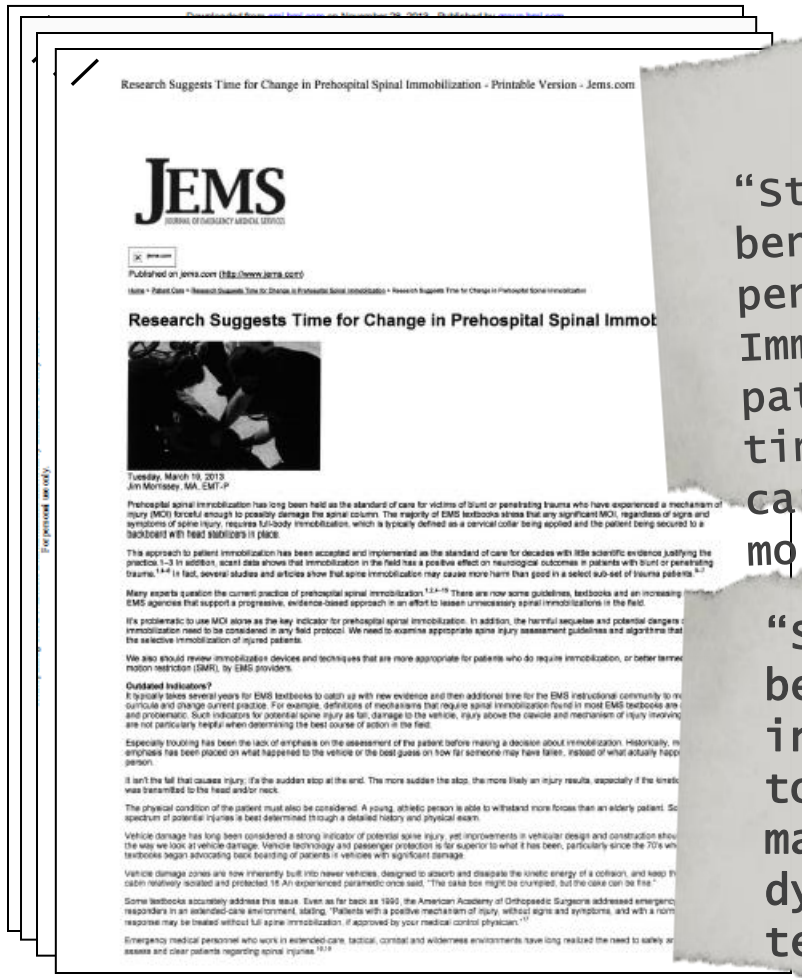
"The ambulance stretcher is in effect a padded backboard and, in combination with a cervical collar and straps to secure the patient in a supine position, provides appropriate spinal protection for patients with spinal injury" (White et al., 1999).

"Patients who are ambulatory or able to self-extricate without causing undue pain should be encouraged to move themselves to a supine position on the EMS cot, after application of a cervical collar" (White et al., 2014).

Émergence d'un consensus


Research Suggests Time for Change in Prehospital Spinal Immobilization - Printable Version - Jems.com

JEMS

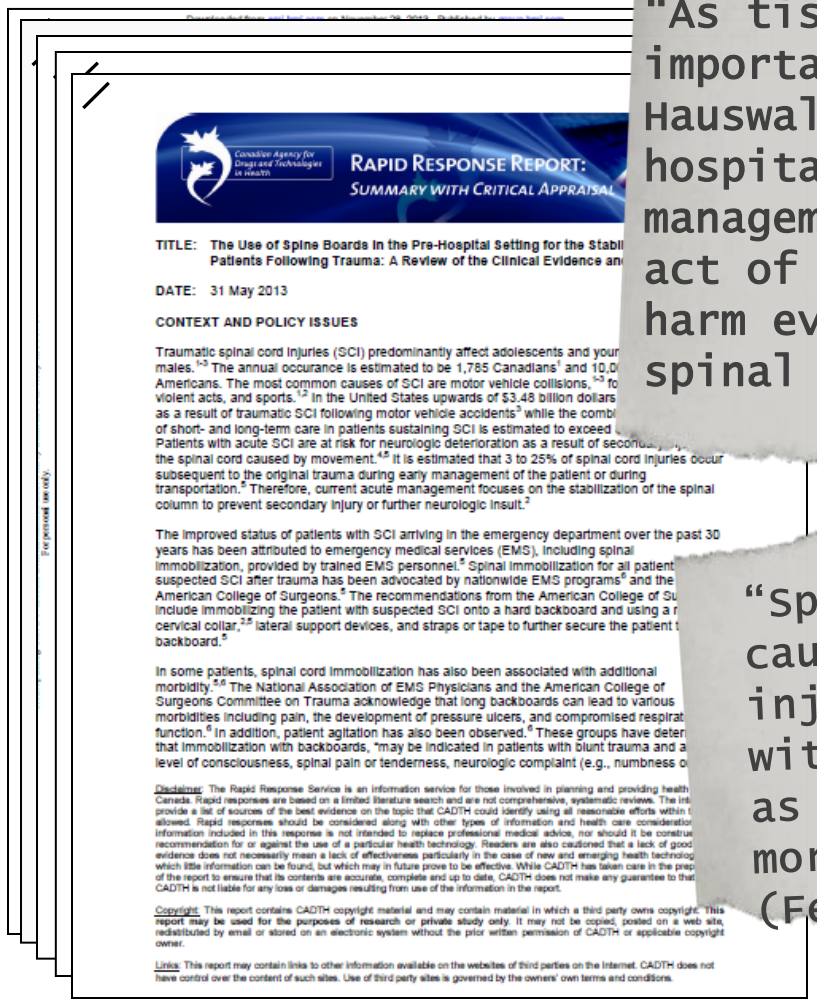
Research Suggests Time for Change in Prehospital Spinal Immob

Tuesday, March 19, 2013
Jim Morrissey, MA, EMT-P

"Studies have also shown limited or no benefit of prehospital immobilization of penetrating trauma patients. Immobilization of this subset of trauma patients can result in prolonged on-scene time and delayed transport to definitive care, which may increase morbidity and mortality" (Morrissey, 2013).

"Spinal immobilization isn't always a benign intervention. It can result in increased scene time, delay of delivery to definitive care, problematic airway management, increased patient pain or dyspnea, and unnecessary radiographic testing" (Morrissey, 2013).

Émergence d'un consensus



RAPID RESPONSE REPORT:
SUMMARY WITH CRITICAL APPRAISAL

TITLE: The Use of Spine Boards in the Pre-Hospital Setting for the Stabil
Patients Following Trauma: A Review of the Clinical Evidence an

DATE: 31 May 2013

CONTEXT AND POLICY ISSUES

Traumatic spinal cord injuries (SCI) predominantly affect adolescents and your
males.[1-3] The annual occurance is estimated to be 1,785 Canadians[1] and 10,0
Americans. The most common causes of SCI are motor vehicle collisions,[1-3] fo
violent acts, and sports.[1,2] In the United States upwards of $3.48 billion dollars
as a result of traumatic SCI following motor vehicle accidents[3] while the combi
of short- and long-term care in patients sustaining SCI is estimated to exceed
Patients with acute SCI are at risk for neurologic deterioration as a result of secon
the spinal cord caused by movement.[4,5] It is estimated that 3 to 25% of spinal cord injuries occur
subsequent to the original trauma during early management of the patient or during
transportation.[5] Therefore, current acute management focuses on the stabilization of the spinal
column to prevent secondary injury or further neurologic insult.[2]

The improved status of patients with SCI arriving in the emergency department over the past 30
years has been attributed to emergency medical services (EMS), including spinal
immobilization, provided by trained EMS personnel.[6] Spinal immobilization for all patient
suspected SCI after trauma has been advocated by nationwide EMS programs[6] and the
American College of Surgeons.[5] The recommendations from the American College of Su
include immobilizing the patient with suspected SCI onto a hard backboard and using a
cervical collar,[2,5] lateral support devices, and straps or tape to further secure the patient
backboard.[5]

In some patients, spinal cord immobilization has also been associated with additional
morbidity.[5,6] The National Association of EMS Physicians and the American College of
Surgeons Committee on Trauma acknowledge that long backboards can lead to various
morbidities including pain, the development of pressure ulcers, and compromised respirat
function.[6] In addition, patient agitation has also been observed.[6] These groups have deter
that immobilization with backboards, "may be indicated in patients with blunt trauma and a
level of consciousness, spinal pain or tenderness, neurologic complaint (e.g., numbness o

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provide a list of sources of the best evidence on the topic that CADTH could identify using all reasonable efforts within t
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"As tissue hypoxia remains the most important factor in trauma management, Hauswald (2012) point out that delaying hospital care (i.e. surgery, airway management, blood transfusions) through the act of spinal stabilization can subsequently harm even those patients with unstable spinal injury" (Fehlings et al., 2013).

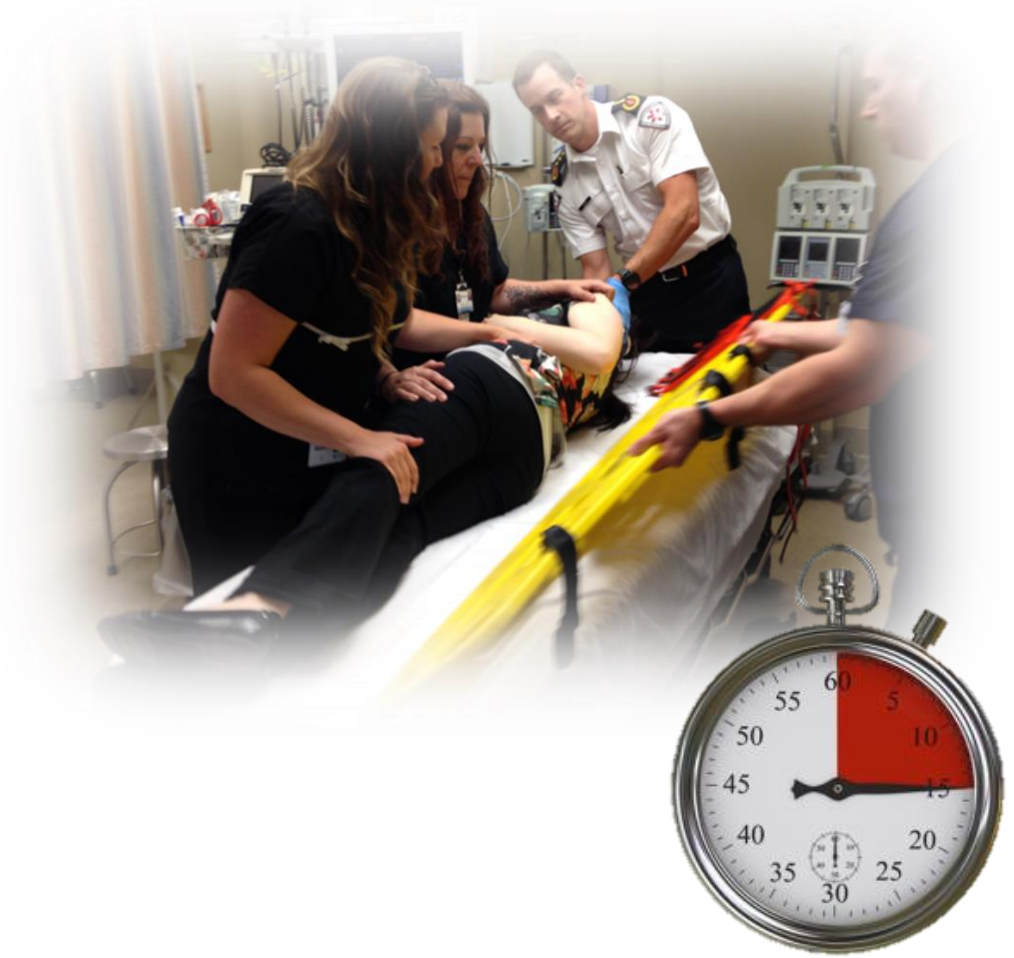
"Spinal immobilization has also been cautioned in the patient with penetrating injuries to the body, neck, or head without neurologic complaint or deficit as an association with increased mortality has been observed with its use" (Fehlings et al., 2013).

Changements au sein de l'industrie

- Les normes de l'industrie évoluent en fonction des données probantes les plus récentes :
  - L'évaluation de l'état de la colonne cervicale pour écarter la présence d'une lésion a été validée comme une pratique sécuritaire pour les travailleurs paramédicaux.
  - L'utilisation d'une planche dorsale longue n'est pas sans danger; en fait, elle comporte un risque important.
  - L'immobilisation en position debout peut être risquée et superflue.
  - Il a été démontré que chez les victimes de blessures pénétrantes (non associées à un déficit neurologique), l'immobilisation sur une planche dorsale longue peut avoir des conséquences néfastes.
  - Le fait de laisser la victime s'extraire elle-même du véhicule (lorsque c'est possible) est probablement moins susceptible d'entraîner des blessures iatrogènes.

Changements au sein de l’industrie

- Le centre de traumatologie qui accueille le patient est responsable de retirer la planche dorsale sans tarder.
  - Même si on soupçonne une lésion de la moelle épinière
- Il faut viser un délai de 15 minutes, sauf si des interventions cliniques immédiates sont nécessaires.



Changements au sein de l’industrie

- Les travailleurs paramédicaux doivent indiquer au personnel depuis combien de temps au total le patient est sur la planche et participer au retrait rapide de la planche.