

CORRESPONDENCE

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Cervical Spine Stabilization

To the Editor:—We read with interest the article by Hastings and Wood¹ concerning head extension and laryngoscopic view during cervical spine in-line stabilization maneuvers. They state that an assistant may apply axial traction to the head of a patient with known or suspected cervical spine injury to stabilize the head and neck during laryngoscopy. However, in a study of cadavers with unstable cervical spines, axial traction on the cervical spine has been shown to cause significant subluxation as well as distraction and, therefore, cannot be recommended.² The degree of movement depends on the direction of the traction and the integrity of the surrounding tissues.

Clearly, further studies are required regarding the airway management of patients with known or suspected cervical spine injury, including effects on neurologic outcome.

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In Reply:—Thank you for the opportunity to respond to Gajraj and Pennant's letter. Although axial traction has been recommended in the past,^{*} the possibility that such a maneuver might distract the spinal cord in patients with unstable cervical spines is concerning and is probably the reason that some authorities now recommend that the assistant applying stabilization "attempt to balance the forces exerted by the intubator" rather than apply active axial traction.¹ We do not use axial traction in our clinical practice.^{2,3} We did not discuss spinal cord distraction in our paper because the risk is currently only theoretical. Cord distraction has been demonstrated in the cadaver study mentioned by Gajraj and Pennant,⁴ and sudden worsening of neurologic deficits has been reported when traction is applied for spine stabilization⁵ or to expose C7 on radiographs,⁶ but axial traction has never been reported to have an adverse effect on outcome in the setting of direct laryngoscopy. Our study focused on the effects of stabilization maneuvers on the amount of head extension

necessary to perform direct laryngoscopy. The results suggested that head extension was likely to be minimized when downward immobilization was used in preference to axial traction.

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