

LETTER TO THE EDITOR

Halter traction for cervical spine injuries – initial treatment in the district hospital

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Dear Editor

The management of the trauma patient with possible spine injury has centered on complete evaluation of the patient according to Advanced Trauma Life Support principles¹ and then on triple immobilization for suspected cervical spine injury. Unfortunately the proper materials may be lacking in district hospitals and improvisation has been irregular. As a result stabilization has remained elusive.

Cervical halter traction has been a method of gentle traction used in home care settings for selected patients with cervical radiculopathy. An active management program with cervical halter traction was initiated for patients with cervical spine injury admitted to Choma General Hospital in Zambia during the years 2000–2009. The surgical consultant on call was available to assist with early radiologic evaluations. We were able to identify 15 patients in this period with cervical spine injury. Most of these injuries were from low-speed bicycle injury, some from porter injuries, some from higher impact

road traffic accidents. The common areas identified were C5 and C6 injuries. The bony injuries were fracture, subluxation, or facet dislocation. The neurologic injuries were radiculopathy and central cord syndrome. The mechanisms of injury were compressive flexion or lateral flexion. Although traction has sometimes been associated with secondary neurologic injury² we did not observe this complication. Our patients had these injuries as isolated injuries without significant additional chest, abdominal, or extremity injury. After early application of traction, follow-up portable X-ray films were obtained. Weights were reduced after 1 week. Patients were discharged at 4 weeks with soft neck collars.

The specific goals of our treatment were to prevent loss of function of the undamaged spine, to assist early functional recovery, and to improve the neurologic outcome. During the course of their hospitalization, we paid attention to urinary bladder drainage, the management of intestinal ileus, and skin care.



We found several benefits from cervical halter traction. First, there was rapid reduction in symptoms and good improvement in motor power from grade 2 or 3 to 4. Secondly X-rays confirmed reduction of subluxation and restoration of normal cervical lordosis. Third, halter traction kept the patient's neck stable and facilitated the appropriate turning of the patient in bed. Assistance was required by family bedside attendants for general nursing care – feeding, toilet, and turning patients to prevent decubitus ulcer. Gentle cervical traction maintained stability and facilitated all these manoeuvres. The fourth benefit relates to respiratory complications of pneumonia, atelectasis, and respiratory failure, which sometimes accompany cervical spine injury³. The development of respiratory failure is mostly dependent on the level and degree of spinal cord injury but the use of halter traction facilitates turning the patient and then allows for much better attention to gentle chest physiotherapy, which helps reduce atelectasis and prevent hypostatic pneumonia. Lastly, we found that following this treatment program reduced the need for subsequent specialist interventions in remote more central hospitals. Most of our patients demonstrated stable flexion/ extension on X-ray films and they went directly home. We were able to teach the nursing staff this improved care of patients. We have

taught this program to junior clinical officers on rotation to the hospital, under direct supervision.

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