Cervical spine injury treatment

- Adhesive Capsulitis of the Shoulder
- Application of V-shaped stealth decompression technique using ultrasonic bone scalpel in anterior surgery for adjacent two-level cervical spondylosis
- Fundamentals of Acute Care for Patients with Traumatic Spinal Cord Injury
- Epithelioid angiosarcoma of the cervical spine: A case report
- Characteristics of Unilateral Cervical Spine Facet Fractures: A Case Series of Adult Trauma Patients
- Comprehensive Review of Multidetector Computed Tomography (MDCT) in the Assessment of Blunt Cervical Spine Trauma in Adults
- Lower cervical C6/C7 andersson lesion with upper cervical C1/C2 fracture in ankylosing spondylitis: a case report and literature review
- Evidence-based clinical guidelines of acute atlas fractures in adults (2025 edition)

If a patient arrives with an intact neurologic examination despite gunshot wound or stab wounds to the neck, the incidence of a cervical spine injury that requires a therapeutic intervention is minute. As a result, in a neurologically intact and examinable patient, a cervical collar should be immediately removed to facilitate the remaining components of the diagnostic evaluation [1].

Treatment of subaxial cervical spinal injury remains controversial. Both the anterior and posterior procedures have serious advantages and disadvantages [2) 3) 4)].

If a cervical spine fracture is suspected, the neck should be immobilized immediately in a cervical collar and backboard. If the cervical spine is out of alignment, cervical traction is applied to realign the spine. Steroids may be administered to control spinal cord damage and inflammation.

Patients with cervical spine fracture-dislocation who cannot be examined during attempted closed reduction, or before open posterior reduction, should undergo cervical MRI before attempted reduction. The presence of a significant herniated disc in this setting is a relative indication for anterior decompression (e.g. by an anterior cervical discectomy and fusion – ACDF) before reduction.

Neck extension is likely to be relatively safe in injuries that are stable in flexion and extension, such as odontoid fracture type II and cervical spine fractures between C5 and C7. Head rotation is likely to be relatively safe in fractures below C4, as well as cervical vertebral body fractures, and laminar fractures without disc disruption. Early dialogue with the neurosurgical team remains a central tenet of the safe management of patients with combined maxillofacial and cervical spine injury [5)]

The current treatment recommendations according to the therapeutic recommendations of the Spine Section of the German Society for Orthopedics and Trauma Surgery (DGOU) as well as the S1

guidelines of the German Trauma Society (DGU) are presented. This second part of the article describes the correct indications and treatment planning for injuries to the cervical spine. Based on the AOSpine classification for subaxial cervical spine injuries, decisions can be made about conservative or surgical treatment as well as individual details of the treatment. The underlying principles of treatment are relief of neurological structures, restoration of stability, and reconstruction/preservation of the physiological alignment [6].

A study of Aciduman and Belen from Ankara University, Turkey, presents information regarding the treatment of fractures and dislocations of the vertebrae, including the use of oral route for upper cervical fractures, presented in certain chapters of the book titled Kitāb al-'Umda fī Ṣinā'a al-Jirāḥa (Ibn al-Quff, 13th century AD).

A printed copy of the second volume of the book was studied. Chapters 22 (“On treatment of vertebral fractures”) and 33 (“On treatment of vertebral dislocation”) of the 17th treatise of this book were translated from Arabic into English. Each section is presented (in full text) in the Results section of this article. The findings were compared with the relevant literature and discussed to determine whether Ibn al-Quff presented novel information compared with that presented by his predecessors.

The writings of Ibn al-Quff regarding vertebral dislocations appear to summarize information derived from his predecessors. Moreover, he modified certain approaches, previously described for vertebral dislocations, and employed them for correcting vertebral fractures. Ibn al-Quff introduced the most novel use of a bridle-like instrument for anterior cervical fracture through the oral route. By introducing the device in the mouth, he described a pushing maneuver to the cervical vertebrae from the ventral site and a simultaneous pulling maneuver by cupping on the neck from the dorsal site.

The use of oral route introduced by Ibn al-Quff may be one of the earliest examples of novel, practical, and advanced cervical spine fracture treatment [7].

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