Subaxial cervical spine injury treatment

- Comprehensive Review of Multidetector Computed Tomography (MDCT) in the Assessment of Blunt Cervical Spine Trauma in Adults
- The Impact of Atlantoaxial Intra-Articular Fusion on Cervical Spine Curvature and Sagittal Balance
- Management of Subaxial Cervical Spine Injury with Unilateral Locked Facet: An Institutional Experience
- Calcium pyrophosphate dihydrate crystal deposition (CPPD) in the retro-odontoid tissue with compression of cervicomedullary junction: Analysis of 46 cases (1984-2020) with literature review
- Surgical Management of Facet Fracture Dislocations of the Subaxial Spine: A Retrospective Cohort Study
- MRI-Based Surgical Planning for Irreducible Subaxial Cervical Fracture-Dislocation With Bilateral Locked Facet Joints: A Retrospective Cohort Study
- Treatment Strategy for Subaxial Minimal Facet/Lateral Mass Fractures: A Comprehensive Clinical Review
- Pediatric Cervical Spine Injuries: Lessons From a Rare Case of C5/C6 Facet Dislocation in an Adolescent With a Systematic Literature Review

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The treatment of fracture dislocations of the cervical spine still varies. Early operative treatment has gained increasing acceptance.

When the decision for surgical treatment is made, early decompression (less than 24 hours) has been associated with better neurologic recovery. Surgical treatment should be individualized based on the injury characteristics and surgeon's preferences.

The current state of subaxial cervical spine trauma is one of great progress. However, many questions remain unanswered. We need to continue to account for the individual patient, surgeon, and hospital circumstances that effect decision making and care [1)].

The surgical treatment of delayed, unstable sub-axial cervical spine injuries is challenging. Multiple treatment regimens have been described in the literature, although there is no consensus regarding the best treatment approach [2)].

The optimal surgical treatment for patients suffering from distractive flexion injury of the subaxial cervical spine with a locked facet (LF) is unknown. Closed reduction via an anterior or posterior approach is a treatment option for LF. Lee et al. examined the surgical outcomes of patients treated for locked facet distractive flexion injury (LF-DFI) in this case series, with a particular emphasis on the surgical approach and reduction maneuver. They retrospectively analyzed the patients with distractive flexion injury of the subaxial cervical spine who underwent surgery between November 2006 and April 2021. Patients who did not have facet subluxation or dislocation or those who achieved LF reduction prior to skin incision were excluded from this study. The patients were divided into 2 groups based on their initial approach, anterior or posterior approach. Perioperative clinical outcomes, including the American Spinal Cord Injury Association scale score, radiological changes, and complications were analyzed. This study enrolled 12 patients with LF-DFI. Four and 8 patients underwent the anterior and posterior approaches, respectively. The LF was reduced using an anterior approach with traction between the vertebral bodies in the anterior approach group and using a posterior approach with partial facetectomy in the posterior approach group. The preoperative American Spinal Cord Injury Association scale scores were as follows: A, 1 patient; B, 1 patient; C, 3 patients; D, 4 patients; and E, 3 patients. Nine patients showed no neurologic deterioration after surgery, whereas 2 had an aggravated neurologic status. Postoperatively, patients who underwent posterior open reduction did not exhibit worsened neurologic symptoms, whereas 2 patients who underwent the anterior approach showed worsened neurologic symptoms. At the final follow-up, all patients achieved radiological fusion, and no complications other than neurologic deterioration were identified. In terms of worsening postoperative neurologic status, a posterior approach using partial facetectomy for LF reduction is considered a safer surgical technique than an anterior approach. To avoid iatrogenic intraoperative cord injury, we recommend posterior approach in patients with LF-DFI [3]

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[2]
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[3]
Lee KS, Park EJ, Min WK. Surgical outcome of locked facet in distractive flexion injury of the subaxial cervical spine: Single institution retrospective study. Medicine (Baltimore). 2023 Jun 2;102(22):e33028. doi: 10.1097/MD.0000000000033028. PMID: 37266603; PMCID: PMC10238040.