Open reduction of locked facets

see Cervical locked facet treatment

- Management of Subaxial Cervical Spine Injury with Unilateral Locked Facet: An Institutional Experience
- Reduction of traumatic unilateral locked facet of the subaxial cervical spine: what predicts successful closed skeletal traction, and is anterior or posterior surgery superior after unsuccessful closed reduction?
- The Challenge of Trans-Ulnar Basal Coronoid Fracture-Dislocations: A Surgical Strategy Based on the Pattern of Coronoid Fracture
- Cervical spine fracture dislocation with mild neurological deficits
- A rare case of lumbar facet fracture-dislocation and review of the literature
- Odontoid Fracture with Locked Posterolateral Atlantoaxial Dislocation: A Case Report and Review of Literature
- Management of Lunate Facet Escape after Distal Radius Fracture Volar Plating: Surgical Technique
- Management of isolated volar lunate facet fractures of the distal radius

.

Surgical reduction of unilateral and bilateral facet dislocations of the cervical spine can be performed by posterior, anterior, or combined approaches.

Posterior approach

Posterior approach: The most common approach. Although rare, still subjects the patient to risk of deterioration from a traumatically herniated disc. Therefore a preoperative MRI should be done if possible. Often requires drilling of the superior aspect of the articular facet of the level below. A foraminotomy is recommended when there are root symptoms to visualize and decompress the root.

Anterior approach

Ease of access, low infection rates, and fewer risks of neurological worsening has popularized the anterior approach. However, the reduction of locked cervical facets can be intricate through an anterior approach.

An anterior approach provides a safe and effective alternative for the treatment of patients with posttraumatic unilateral cervical locked facet when preoperatively the cervical alignment of the dislocation is achieved with a closed reduction [1)].

Anterior approach: By removing the disc at the subdued level and exploring the anterior epidural

space, the risk of worsening deficit due to a traumatic herniated disc is theoretically reduced. Reduction may be achieved by adding simultaneous manual traction.

Combined anterior/posterior (360º) approach: using anterior.

Case series

Patients with single level traumatic subaxial cervical spine dislocation (n = 39) treated by this modified anterior technique were studied. The technique involved standard Smith-Robinson approach, discectomy beyond PLL, use of inter-laminar distracter to distract while Caspar pins were used as “joysticks” (either flexion-extension or lateral rotation moments are provided), to reduce the sub-luxed facets. Among 51 patients with cervical type C injury treated during the study period, 4 patients who had spontaneous reduction and 8 treated by planned global fusion were excluded.

39 patients of mean age 49.9 years were studied. The levels of injury included (C3-4 = 2, C4-5 = 5, C5-6 = 20, C6-7 = 12). 18 were bi-facetal and 21 were uni-facetal dislocation. One facet was fractured in 17 and both in 5 patients. 30% (n = 13) had a concomitant disc prolapse. The neurological status was as follows: 9 ASIA A, 9 ASIA C, 13 ASIA D and 8 ASIA E. All the patients were successfully reduced by this technique and fixed with anterior locking cervical locking plates. No supplemental posterior surgery was performed. 22 patients with incomplete deficit showed recovery. The mean follow-up was 14.3 months and there was no implant failure except one patient who had partial loss of the reduction.

Patients with traumatic sub-axial cervical dislocation (AO type C injuries) can be safely and effectively reduced by this technique. Other advantages include minimal blood loss, less risks of infection, shorted fusion zone, good fusion rate and neurological recovery [2].

1)
Piccirilli M, Liberati C, Santoro G, Santoro A. Cervical Posttraumatic Unilateral Locked Facets: Clinical, Radiologic, and Surgical Remarks on a Series of 33 Patients. Clin Spine Surg. 2016 Jul;29(6):261-5. doi: 10.1097/BSD.0b013e3182870c3f. PMID: 27137154.
2)
Kanna RM, Shetty AP, Rajasekaran S. Modified anterior-only reduction and fixation for traumatic cervical facet dislocation (AO type C injuries). Eur Spine J. 2017 Dec 26. doi: 10.1007/s00586-017-5430-y. [Epub ahead of print] PubMed PMID: 29279998.