

# Cervicothoracic Junction Fracture Dislocations

Eugene Wong, David de La Harpe, L Ton, P Wilde  
Vertebral Column Surgical Group & Victorian Spinal  
Cord Injury Service, Austin Health, Heidelberg  
Australia



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# Introduction

- Unstable fractures at the cervicothoracic junction - rare injury with a variation of injury patterns and poor neurological outcome.
- Diagnosis of these injuries require good imaging and fixation is biomechanically challenging.



# Aim

- The aim of this study was to evaluate the surgical experience in treating traumatic fractures at the cervicothoracic junction.



# Methods

- There were 11 patients who underwent surgery for unstable fractures/ dislocation at the cervicothoracic junction between 2006 to 2008.
- Clinical outcome was evaluated using ASIA scoring and radiological outcomes using CT scans and plain radiographs.
- Follow-up periods ranged from 11 to 48 months, with an average of 18 months.



# Results

- 9 patients sustained complete neurologic deficits with no recovery ASIA A with the remaining in ASIA B.
- Neurologic deficit was related to the degree of anterior displacement of C7 on T1.
- 8 patients sustained a C7 burst fracture and 3 had a C7 T1 fracture dislocation.
- Anterior corpectomy and fusion was performed in 8 patients.

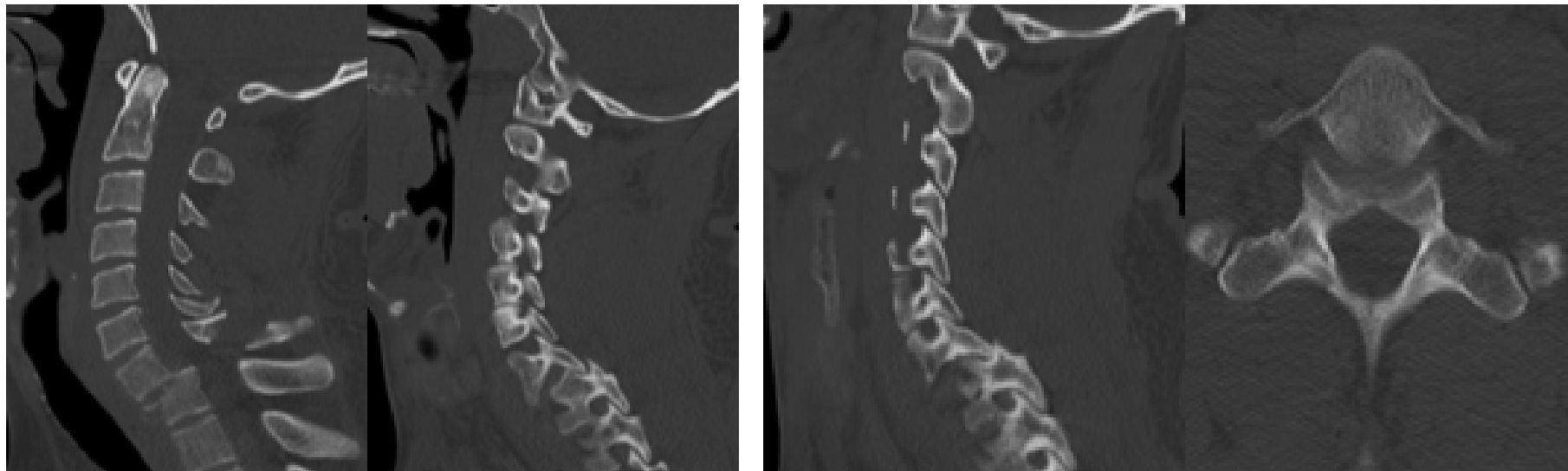


# Results

- Posterior reduction and rod - screw fixation was done in 1 patient while a combined approach and fixation was performed for 2 patients.
- There was a complication of misplaced upper cervical plate screws with tilting of the mesh cage inferiorly.
- No subsequent displacement of the implant was noted on follow-up.



# C7 T1 Fracture Dislocation



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# C7 T1 Fracture Dislocation

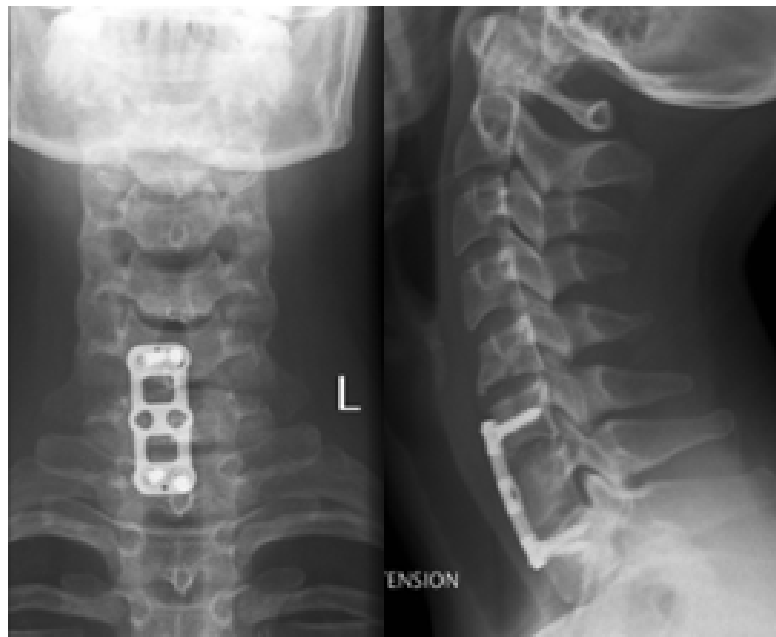


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# C7 Burst Fracture



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# C7 Burst Fracture



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# Conclusions

- Fracture–dislocation at the cervicothoracic junction is a rare injury with a poor neurologic outcome.
- The anatomic and biomechanical features of the cervicothoracic junction require the selection of suitable approach and implants.



# Conclusions

- The anterior approach is valuable in treating burst fractures at C7.
- Facet dislocations at the cervicothoracic junction are best treated with a posterior lateral mass and pedicle screw fixation or with a combined approach.

