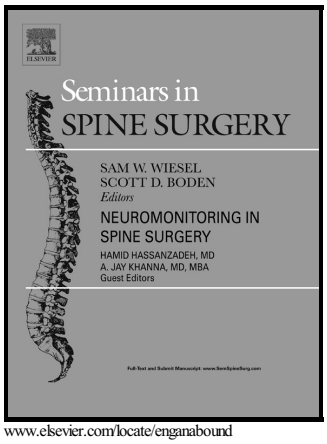

Management of unilateral facet fractures with and without subluxation/dislocation

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Management of unilateral facet fractures with and without subluxation/dislocation

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ABSTRACT: Nearly one third of patients with subaxial cervical spine trauma sustain a facet/lateral mass fracture. The morphology of these injuries is a fracture line running through the lateral mass with various degrees of displacement. The patients complain of neck pain, or they present with neurological deficit referable to nerve or spinal cord injury. MRI indicates various degrees of damage to the disco-ligamentous complex (DLC) or spinal cord. Although management of isolated non-displaced unilateral facet fractures remains controversial, low level evidence recommends surgical fixation for unilateral facet fractures with subluxation or dislocation to maintain alignment, prevent neurologic injury promote functional recovery.

INTRODUCTION

Kinematics: Facet joints and capsules are major elements of the posterior arch, rendering significant stability to subaxial motion segments, and making smooth, effortless, and painless multidimensional movements of the cervical spine possible without undue pressure on the neural elements. Morphometric studies by Ebraheim indicated that as one moves caudally in the subaxial cervical spine, there is a drop in facet height and thickness, explaining the vulnerability of C6 and C7 superior articulating processes, which are prone to fracture dislocations.[1, 2] In addition, cadaveric studies by Zdeblick et al, Cusick et al, and Raynor et al indicated that resection of 50% to 75% of the facet joints significantly added to compressive load, flexion sprain, and shear while reducing torsional stiffness.[3-6] Translation of preclinical studies into human facet injuries may be problematic, because MRI lacks the sensitivity to allow