

Scapular Spine Fracture Fixation Using Pre-Contoured Distal Clavicle Plate

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Case Overview

This video discusses the case presentation of a 34-year-old woman with acute shoulder pain after being lifted and dropped by a tornado. She presented to the clinic in a sling 4 weeks after the event, reporting continued pain and stiffness. Shoulder range of motion was limited because of pain. Radiographs demonstrated a complex, comminuted scapular body fracture with extension into the glenoid articular surface, scapular spine, and acromion. CT scans confirmed considerable displacement of the scapular spine and the acromion (>5 mm). After discussion of the treatment options, the patient elected to undergo open reduction and internal fixation of the scapula fracture.

Method/Technique

The patient was placed in the beach-chair position, and an incision that followed the scapular spine onto the acromion was made. The upper trapezius was elevated superiorly, exposing the fracture. The edges of the fracture were cleaned with the use of a rongeur and curet. A pre-contoured, five-hole 3.5-mm distal clavicle plate with lateral extension was used for fixation of the fracture. The plate was fixed to the acromion and the distal scapular spine with the use of locking screws. The free end of the plate was then used to hold the fracture in reduction while the void was filled with demineralized bone matrix. Compression was attained with the use of a nonlocking screw just medial to the fracture in the scapular spine. Finally, two locking screws filled the remaining medial holes. Fluoroscopy was used to confirm fracture reduction and hardware placement.

Results

The patient's arm was placed in a sling. At 6-week follow-up, the patient reported considerable improvement in pain and gradual improvement of range of motion, with 90° of abduction and forward flexion. Radiographs obtained at 6 weeks postoperatively demonstrated intact hardware, retained reduction, and early signs of bony healing.

Summary

Displaced acromion and scapular spine fractures are one of the few indications for surgical management of scapula fractures. Open reduction and internal fixation of acromion and scapular spine fractures with the use of pre-contoured distal clavicle plates is a practical and suitable solution for these challenging fractures.