Scapula Fracture
Patient information

- 60-year-old male
- Right hand dominant
- Past medical history: None
- Patient was running, tripped and slammed his left shoulder into a parked car.

Case background information

60-year-old right-hand dominant male with no significant past medical history sustaining a direct blow to the lateral left shoulder. Patient complaining of severe shoulder pain. X-rays reveal evidence of a displaced intra-articular glenoid fracture with scapular body extension and comminution. The fracture extends from the glenoid neck to the base of the acromial spine as well as to the inferior pole of the scapula. Preoperative CT scan confirms the significant displacement of the glenoid fragment involving approximately 40% of the glenoid. There is also a loose osteochondral glenoid fragment.

Patient is indicated for ORIF of scapula fracture.

<table>
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<th>Implants</th>
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<tr>
<td>EVOS MINI 2.7mm 10 Hole Strength Plate</td>
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<td>EVOS MINI 2.7mm 4 Hole Flexible Plate</td>
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<td>EVOS MINI 2.0mm 4 Hole Strength Plate</td>
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<td>EVOS MINI 2.0mm 10 Hole Strength Plate</td>
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<td>EVOS MINI 2.0mm 8 Hole Strength Plate</td>
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Procedures

Open Reduction Internal Fixation left scapula fracture
Loose osteochondral fragment
Intra-articular Glenoid fragment
Lateral border
Vertebral border
Base of the Acromial spine
Inferior pole of the scapula
Acromial spine
Because of the fracture pattern an extensile posterior modified Judet approach to the scapula was used.

The patient was placed in a lateral decubitus position. An incision was made just caudal to the acromial spine in line with the acromial spine towards the base of the acromial spine. Next the incision was curved distally in line with the vertebral border of the scapula just lateral to the vertebral border towards the inferior pole of the scapula.

The dissection was taken down to the deltoid and rotator cuff muscular fascia.

Next the subcutaneous flap was elevated and retracted laterally. At this time the inferior edge of the deltoid fascia was incised and retracted cephalad and laterally. Next the deltoid origin was elevated from the acromial spine and retracted laterally.

At this time the interval between infraspinatus and teres minor was developed down to the lateral border of the scapula. This dissection was extended laterally to the glenohumeral joint and medially to the inferior pole of the scapula.

In this case because of the fracture pattern the infraspinatus origin was also slightly elevated from the base of the acromial spine exposing the cephalad medial edge of the scapular body fracture.
Procedure

Next the multiple fractures at the base of the acromial spine, the inferior pole of the scapula, the lateral border of the scapula and the intra-articular glenoid fracture were reduced using multiple reduction clamps. The loose small osteochondral fragment was excised.

A 2.0mm 10 Hole Strength Plate was used to fix the scapular body fracture at the base of the acromial spine. This plate must be placed on the inferior border of the base and not directly posterior where it can cause irritation.

A 2.0mm 8 Hole Strength Plate was used to fix the scapular body fracture at the inferior pole of the scapula.

A 2.0mm 4 Hole Strength Plate was used to fix the butterfly fragment at lateral border of the scapula to the intact scapular body.

A 2.7mm 10 Hole Strength Plate was used to fix the scapular neck and glenoid fracture to the intact scapula preventing varus displacement of the intra-articular glenoid fracture. The most lateral screw through this plate is an interfragmentary screw across the glenoid fracture. This screw is directed towards the base of the acromion.

A 2.7mm 4 Hole Flexible Plate was used to further stabilize the glenoid fracture preventing posterior displacement of the glenoid fragment.
Results

Three months post-operatively the patient has mild pain with shoulder range of motion. He has returned back to work and is being followed by outpatient physical therapy. Patient has regained approximately 70% of his shoulder motion as compared to the opposite site.
Case study author

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Surgeon quote
The EVOS™ MINI Plating System is specially useful in that the plates can be used as temporary intra-operative reduction tools as well as the definitive implants of choice. It is low profile with variable angle locking option. The plate bending pliers make contouring of the plates very easy.

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