



COMMUNITED EXTRA-ARTICULAR SCAPULAR BODY FRACTURE SURGICAL FIXATION AND FUNCTIONAL OUTCOME

AUTHOR: Dr BORRA JYOTHI VENKATA SAI KISHOR CHANDRA. POST GRADUATE.

CO-AUTHOR: Dr. V NAGESWARA RAO (HEAD OF DEPARTMENT OF ORTHOPAEDICS)

INTRODUCTION

Scapular fractures are uncommon injuries, accounting for less than 1% of all fractures and usually result from high-energy trauma such as road traffic accidents or falls from height. Electrical injuries causing scapular fractures are extremely rare and are thought to occur due to violent involuntary muscle contractions following electric shock. Because of the surrounding muscular envelope and thoracic cage protection, scapular fractures are often associated with significant soft tissue injury and may be easily missed. Operative management is indicated in displaced fractures involving the lateral border, glenoid neck, or body when functional impairment is anticipated. We report a rare case of scapular fracture following electrical injury managed surgically using plates and screws through Brodsky posterior approach.

ABSTRACT

Scapular fractures following electrical injuries are rare clinical entities. We present a case of a 55-year-old patient who sustained a scapular fracture after an accidental electric shock. The patient was evaluated clinically and radiologically and was found to have a displaced fracture involving the lateral and inferior border of the scapula. Surgical fixation was performed using a posterior Brodsky approach. Open reduction and internal fixation were achieved using reconstruction plates and cortical screws. Postoperative recovery was uneventful, with satisfactory radiological alignment and functional outcome. This case highlights the mechanism, surgical approach, and management considerations of scapular fractures following electrical injuries.

CASE REPORT

Case Presentation

A 53-year-old male patient farmer by occupation, presented to the casualty department with an alleged history of a fall due to accidental electric shock, followed by severe pain in the back of the left shoulder associated with diffuse swelling and restriction of movement in the shoulder region.

Clinical Examination

A diffuse swelling over the left scapular region with no discoloration, no visible scars or sinuses. No local rise of temperature, diffuse tenderness over the body of the scapula present. The left shoulder range of motion is painful and restricted.

Radiological Evaluation

X-ray Findings:

X-ray (Scapular Y view) suggestive of comminuted Scapular body fracture.

CT of Left shoulder :

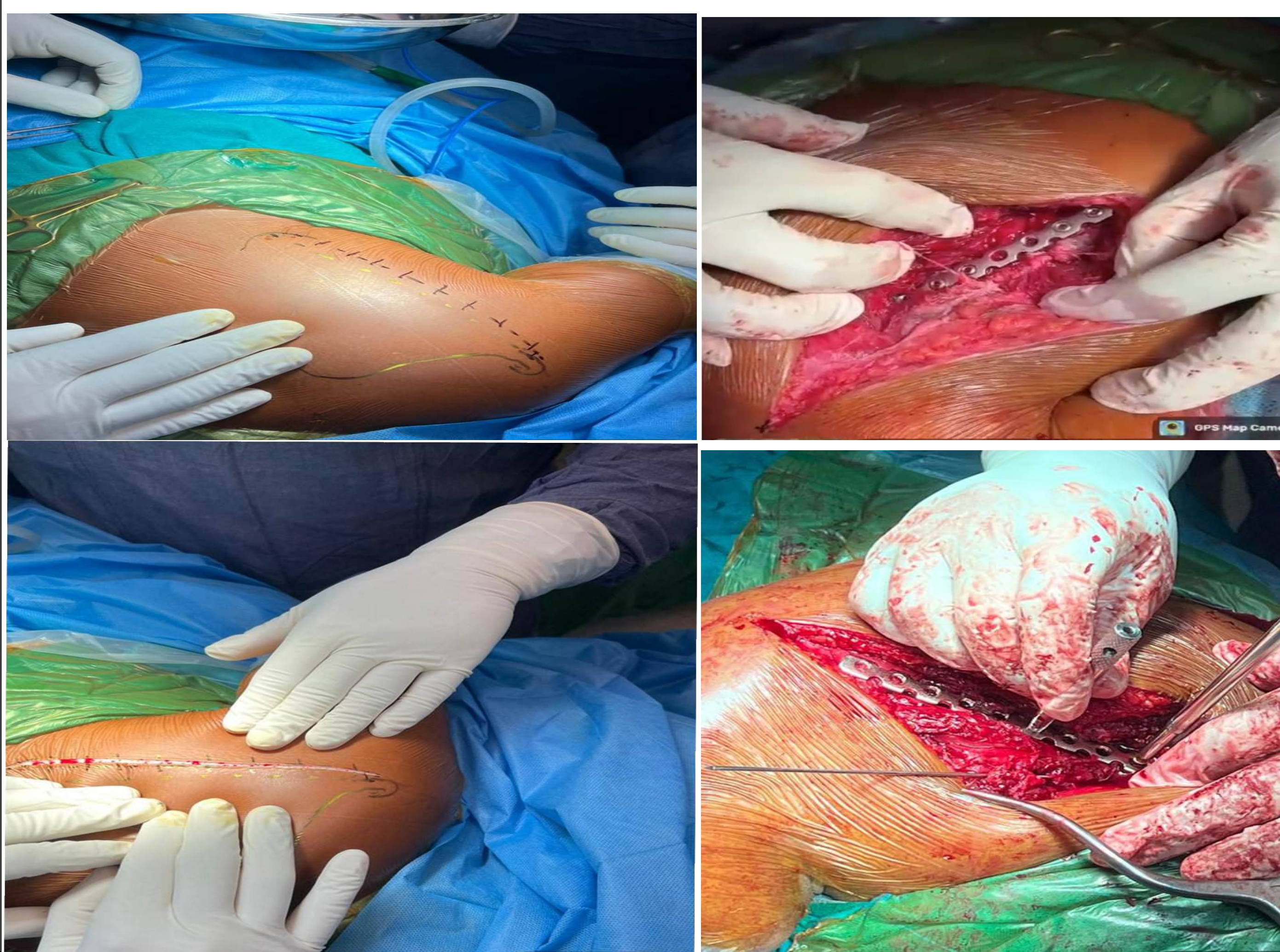
Comminuted fractures of the body scapula involving the medial, inferior and lateral walls just below the scapular neck. Therefore, surgical management was planned with standard orthopedic instruments and a 3.5 mm reconstruction plate and cortical screws due to fracture comminution and displacement. Ethical standards were maintained, and informed consent was obtained from the patient for surgery and publication.

PRE-OP IMAGING



OPERATIVE FINDINGS

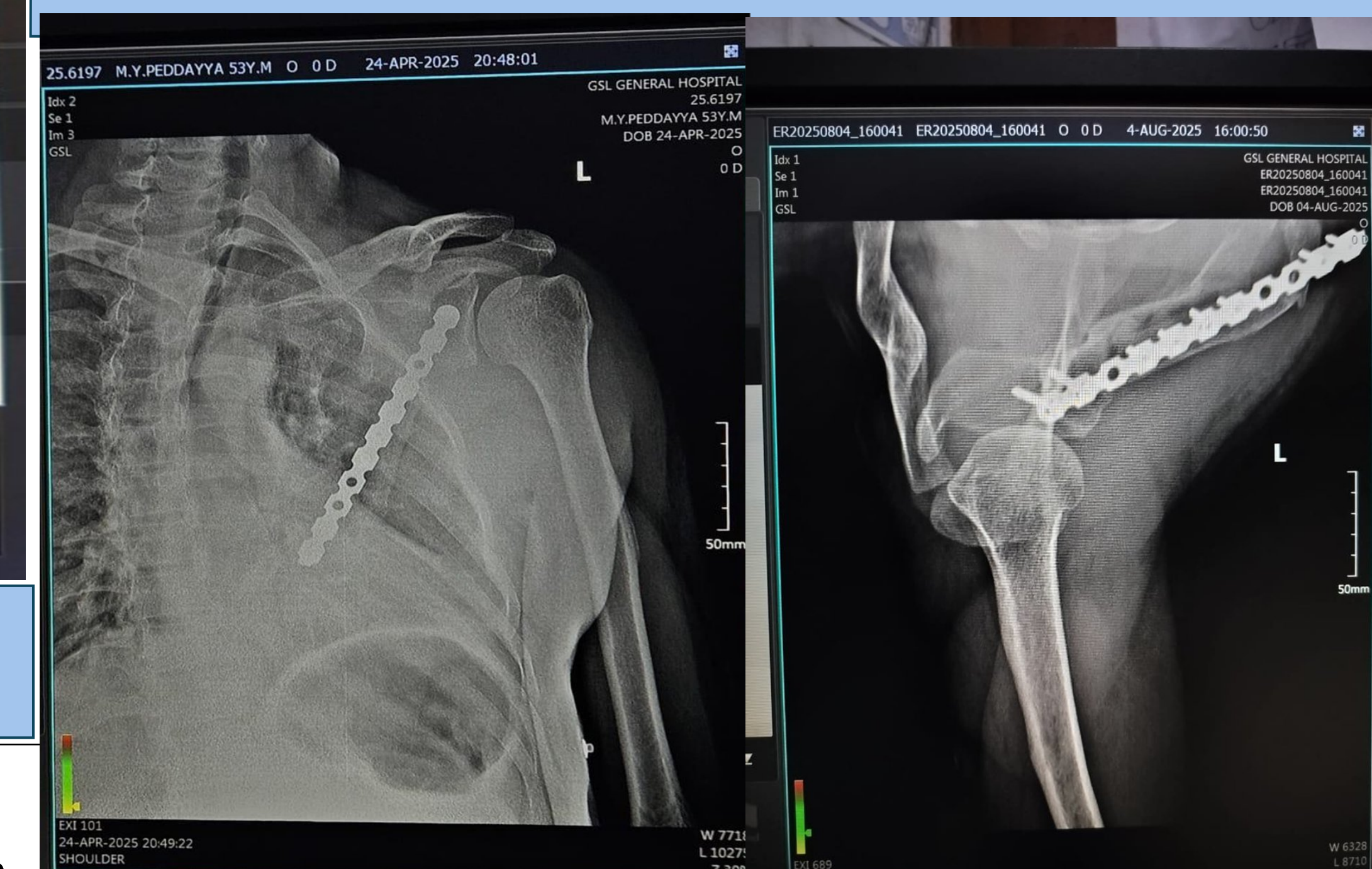
After routine preoperative evaluation and anesthesia clearance, the patient was positioned in a lateral decubitus position. A posterior Brodsky approach was used. A 10–12 cm skin incision was made starting from the posterior corner of the acromion and extending distally up to the inferior pole of the scapula, parallel to the lateral border of the scapula. Skin and subcutaneous tissues were incised, and the interval between the deltoid and teres minor muscles was identified and carefully separated. The fracture fragments along the lateral border of the scapula were exposed. The levator scapulae muscle was split to expose the inferior pole of the scapula. The inferior and lateral borders of the scapula were adequately visualized. Fracture fragments were cleared of interposed soft tissue, anatomically reduced, and aligned. Fixation was achieved using reconstruction plates contoured to the scapular anatomy and secured with screws. Wound closure was done in layers over a suction drain.



DISCUSSION

Electrical injuries can cause fractures due to sudden, forceful muscle contractions rather than direct trauma. Scapular fractures resulting from such mechanisms are rare and sparsely reported in literature. Most scapular fractures are managed conservatively; however, displaced fractures involving the lateral border or inferior pole may benefit from surgical fixation to restore shoulder biomechanics. The Brodsky posterior approach provides excellent exposure of the lateral and inferior borders of the scapula while preserving surrounding musculature. Reconstruction plates allow stable fixation and early mobilization, leading to favorable functional outcomes.

POST-OP IMAGING



CONCLUSION

Scapular fractures following electrical injuries are rare but should be considered in patients presenting with shoulder pain after electric shock. Surgical management using a posterior Brodsky approach and internal fixation with reconstruction plates provides good anatomical reduction and functional recovery in displaced fractures.

TAKE HOME MESSAGE

- Surgical fixation of scapular body fractures is indicated only in selected displaced injuries and when performed with a posterior approach with stable plating, restores anatomy, enables early mobilization, and leads to excellent functional outcomes

RESULTS

Postoperatively, the patient had stable fixation with satisfactory alignment as confirmed by radiographs. There were no immediate postoperative complications such as infection, neurovascular injury, or implant failure. Pain was significantly reduced, and early passive shoulder mobilization was initiated. At follow-up, the patient showed progressive improvement in shoulder range of motion and functional outcome.

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