



Fixation of Terrible Triad Fracture in Young Adult through Anterior Approach – A Case Report

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Case Report

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Abstract

Introduction: The terrible triad of the elbow is defined as the combination of fractures of the radial head and ulnar coronoid process and dislocation of the elbow joint, and is often associated with collateral ligaments injuries.

Objective: The objective is to report the clinical outcomes of an anterior surgical approach for coronoid fracture with plate fixation in the management of a case of terrible triad fracture with undisplaced radial head.

Case Details: A 23 years old male presented with complaints of pain and swelling in right wrist and left elbow region since 1 day. He had a history of fall from height 1 day back with no known comorbidities or DNVD.

Conclusion: Terrible triad fracture can be treated successfully with plate fixation through an anterior surgical approach in cases of undisplaced radial head with physiological range of motion at elbow which allows for accurate reduction and rigid internal fixation and early functional exercise, resulting in a favourable outcome.

Keywords: Triad Fracture; Anterior Approach, Adults

Introduction

The terrible triad of the elbow is defined as the combination of fractures of the radial head and ulnar coronoid process and dislocation of the elbow joint, and is often associated with collateral ligaments injuries. This injury is commonly seen in accidents that involved great force, such as vehicle crashes or falls from heights. The olecranon process of the ulna is most likely to glide out of the trochlea of humerus and thus dislocate posteriorly, causing successive injuries to muscles, ligaments and joint capsules [1].

The injury is most likely to occur when the following three factors are present simultaneously: the elbow joint is in extension and abduction, the forearm is in supination, and

a great force is imposed in an axial direction.

Objective

The objective is to report the clinical outcomes of an anterior surgical approach for coronoid fracture with plate fixation in the management of a case of terrible triad fracture with undisplaced radial head.

Case Details

A 23 years old male presented with complaints of pain and swelling in right wrist and left elbow region since 1 day. He had a history of fall from height 1 day back with no known comorbidities or DNVD.

Clinical and radiological evaluation showed fractures of coronoid process of left ulna, head of left radius and posterior dislocation of radius and ulna [2].

Management

Under general anaesthesia, the relocation of the elbow was done. Radial head was undisplaced with no restriction of movements at elbow.

The fractures of coronoid process of left ulna was treated

with placement of plates through anterior surgical approach. A hinged plastic brace was applied after surgery and used for 2 weeks for the patient.

As pain and swelling gradually subsided after 1 week, the patient was allowed to practice gentle passive and active elbow motion which increased the range of motion [3].

Steps in Surgery

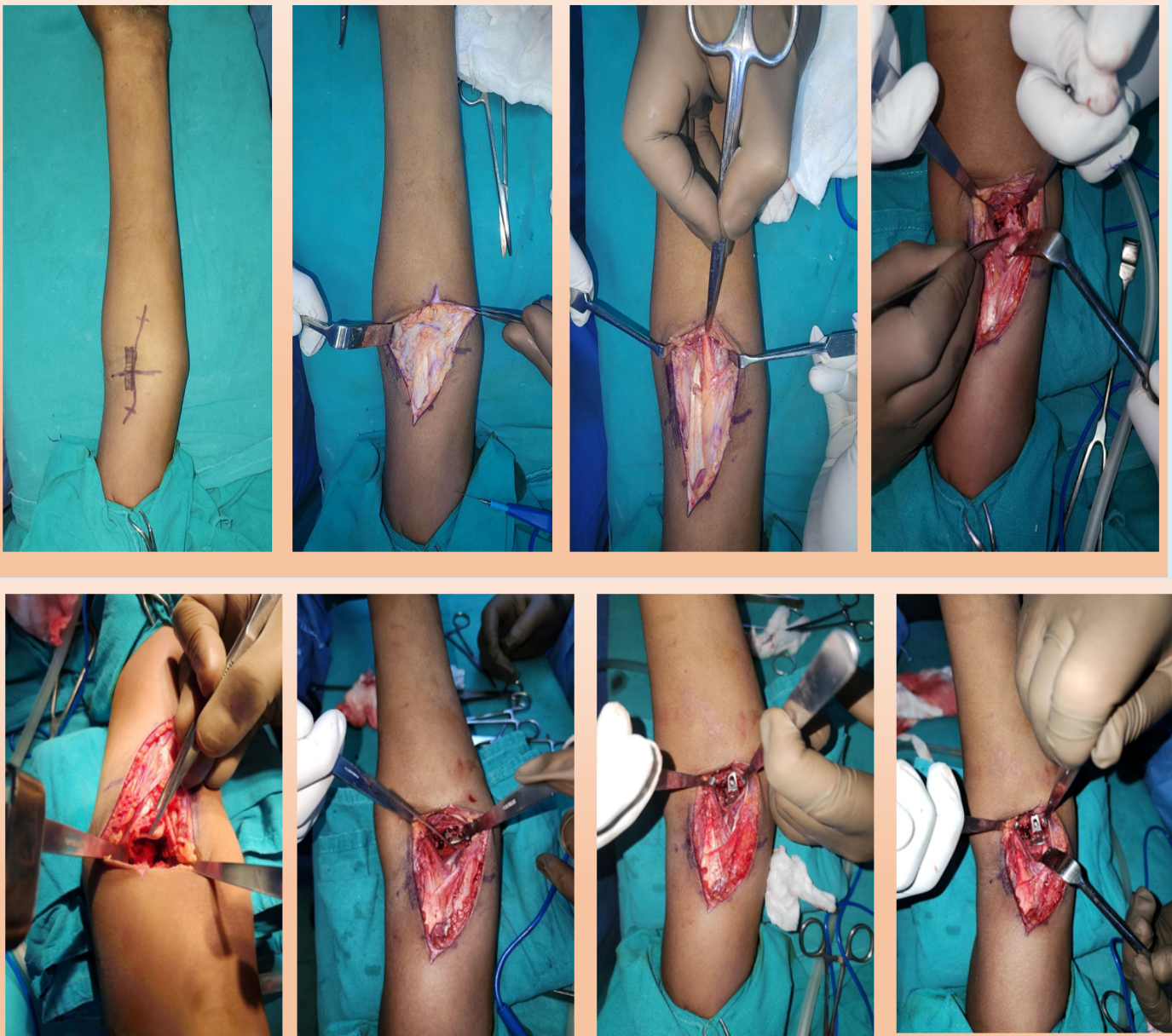


Image 1: Radiological Evaluation.

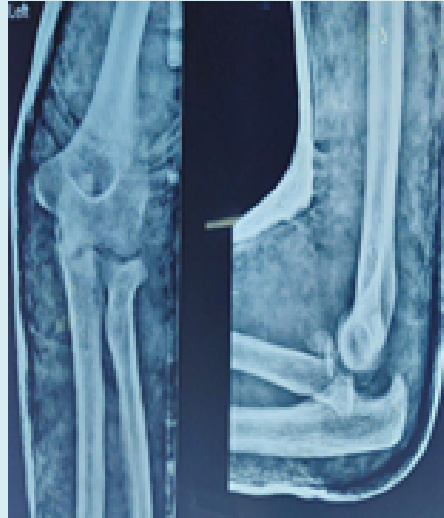


Image 2: Preoperative radiograph showing terrible triad of elbow.

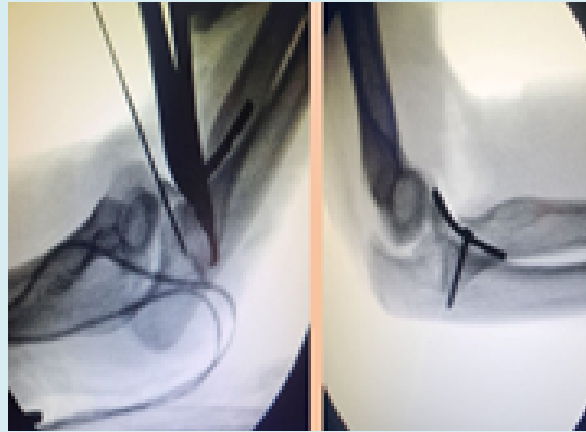


Image 2: Intra-operative radiograph after reduction.

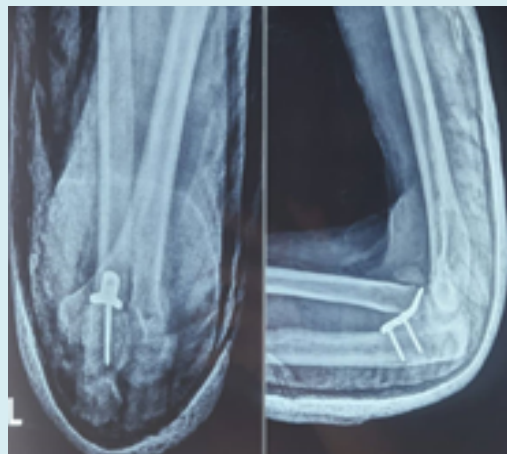


Image 3: Post-operative radiograph after reduction and fixation.

Conclusion

Terrible triad fracture can be treated successfully with plate fixation through an anterior surgical approach in cases of undisplaced radial head with physiological range of motion at elbow which allows for accurate reduction and rigid internal fixation and early functional exercise, resulting in a favourable outcome [4,5].

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