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Functional and Radiological Outcome in Management of Diaphyseal Fracture of Both Bone Forearm with Open Reduction and Internal Fixation.

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KEYWORDS

Functional and Radiological, Diaphyseal Fracture

ABSTRACT:

The introspection aims to correlate the health status with functional and radiological outcomes in patients treated by open reduction and internal fixation for fractures of both bones of the forearm and evaluate the surgical outcomes of plate and screws fixation for these fractures.

INTRODUCTION :

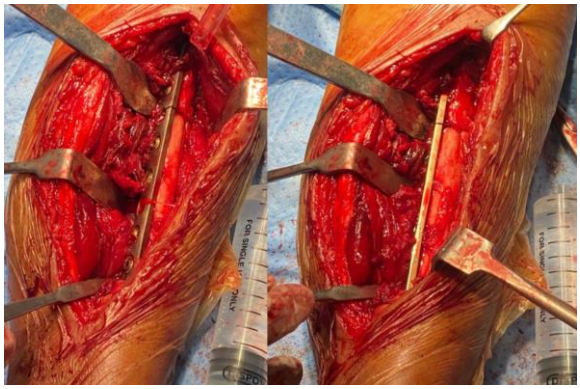
In this era of active life, rapid industrialisation, increasing road traffic accidents, and competitive sports; the incidence of fractures of forearm bones is increasing in frequency. Fractures of both bones of the forearm are moderately typical injuries which can challenge the treating physician. Treatment of diaphyseal forearm fractures in adults is commonly based on open osteosynthesis with plates and screws on each of the forearm bones. Healing occurs reliably after closed treatment but malunion, with consequential decreased rotation of the forearm, is expected and has been associated with unsatisfactory results.The plates most widely used for the internal fixation of forearm fractures are a 3.5 mm locking compression plate (LCP), dynamic compression plate, and limited contact dynamic compression plate.

CASE REPORT 1 :

A 35 year old male came to the casualty with alleged history of fall from two wheeler 6 days back and complaints of inability to move his forearm and swelling over the forearm .Gross restriction of movements were present .No open injuries.Distal pulse intact.Active finger movements present.

PRE OP XRAY:

INTRA OP PICTURE:



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POST OP XRAY:

6 MONTH FOLLOW UP XRAY:

RANGE OF MOVEMENTS:

SURGICAL TECHNIQUE :

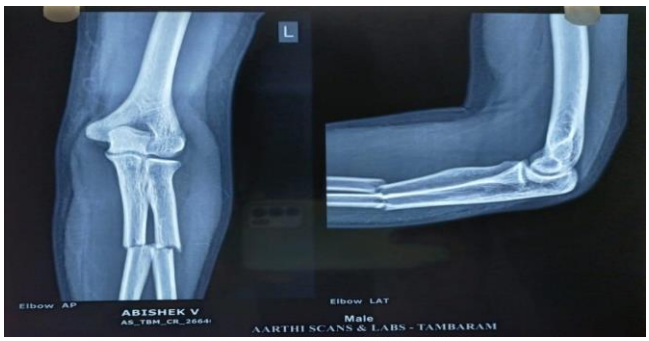
The surgery was performed under tourniquet, with the patient placed in supine position, under intraoperative C arm guidance.The standard modified henry and subcutaneous approach was used

The above shown instruments were used and plate was fixed.Fracture reduction satisfactory.Wound closed in layers.Sterile dressing bone.Below elbow slab applied.

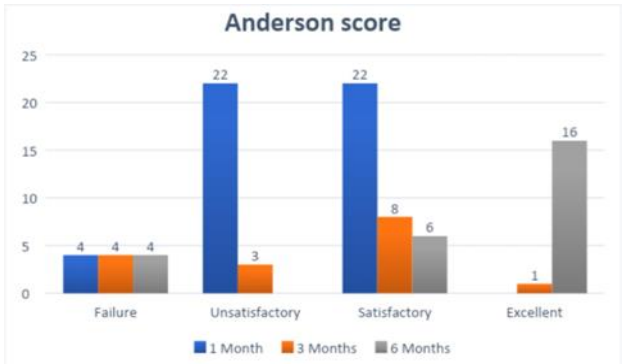
CASE REPORT 2:

Patient came with alleged history of slip and fall in bike and sustained injury to left forearm with swelling and restricted range of motion.

PRE OP XRAY :



INTRA OP PICTURE:



COMPARISON OF ANDERSON SCORE AT DIFFERENT FOLLOW UPS

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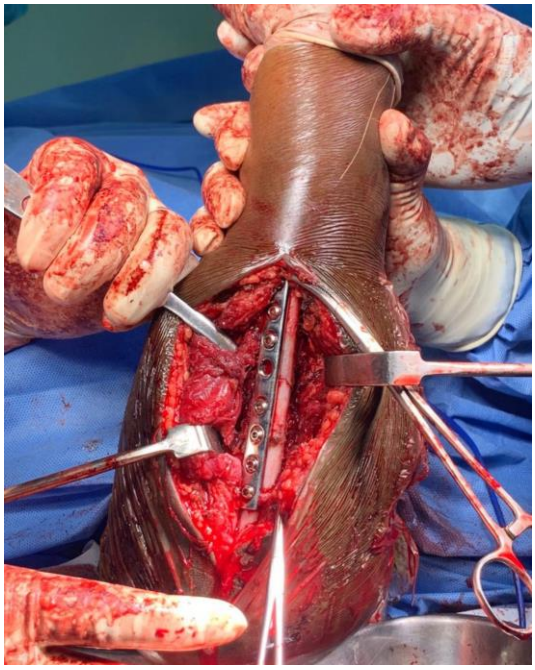
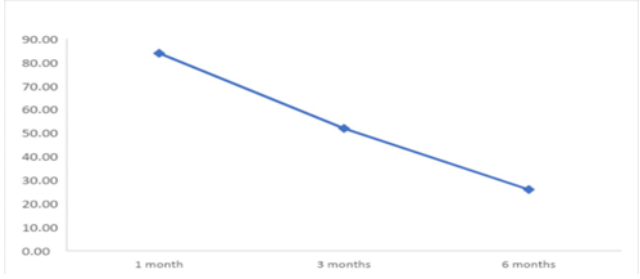


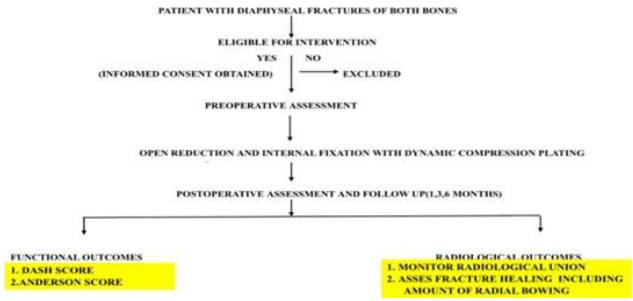
POST OP XRAY

SCORING SYSTEMS USED



COMPARISON OF DASH SCORES AT DIFFERENT FOLLOW UP

FLOWCHART



DISCUSSION :

Both bone Fracture of the forearm is considered a fracture of necessity, meaning that conservative treatment is not an option and that surgery is necessary. Restoring length, alignment, and rotation, achieving stable, rigid internal fixation, preserving fracture biology, and guaranteeing early recovery are the guiding principles of fixation for all diaphyseal fractures. Complications such as loss of reduction and malunion are anticipated. The most effective therapy for displaced diaphyseal fractures in adults is generally agreed to be open reduction and internal fixation with a dynamic compression plate.

CONCLUSION :

The study highlights effective outcomes in fracture treatment, characterized by significant functional improvements and high union rates. Despite favourable results, complications such as infection and non-union were noted, warranting ongoing vigilance in post-operative care. The findings emphasizes the intervention's efficacy in enhancing patient outcomes,validated by improved Anderson's and DASH scores over time.

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