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RESEARCH ARTICLE

A PROSPECTIVE STUDY TO ASSESS THE FUNCTIONAL OUTCOMES OF DIAPHYSEAL BOTH BONE FRACTURES OF THE FOREARM IN ADULTS TREATED BY OPEN REDUCTION AND INTERNAL FIXATION WITH DYNAMIC COMPRESSION PLATE

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Abstract

Introduction: Forearm fractures can be regarded as articular fractures as slight deviations in the spatial orientation of the radius and ulna will significantly decrease the forearm's rotational amplitude and thereby impair the positioning and function of the hand. Thus, the management of these fractures deserve special attention as their treatment is not the same as the treatment of other diaphyseal fractures. Open reduction and internal fixation for diaphyseal fracture in the adults are generally accepted as the best method of treatment, even though closed reduction may be achieved.

Objective: The Objective of this study is to evaluate the functional outcome after open reduction and internal fixation of the forearm diaphyseal fractures by Dynamic Compression Plate (DCP).

Methods: This is a prospective study of 72 cases of diaphyseal both bone forearm fractures in adults who attended casualty and of Government Medical College Hospital, Kozikkode and were treated by open reduction and internal fixation with dynamic compression plating between September 2020 to August 2022.

Results: The functional outcome as per DASH scoring system in dynamic compression plating (DCP) group was that 85 % (61 patients) had excellent results, 15 % (11 patients) had good results with no patient having fair and poor results.

Conclusion: Fixation with Dynamic Compression Plate has stood the test of time and provides excellent fixation. DASH is a widely accepted standardized scoring system to assess upper limb function. In comparison with few of the previous studies our results are better in terms of functional outcome.

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same as the treatment of other diaphyseal fractures. Open reduction and internal fixation for diaphyseal fracture in the adults are generally accepted as the best method of treatment, even though closed reduction may be achieved.

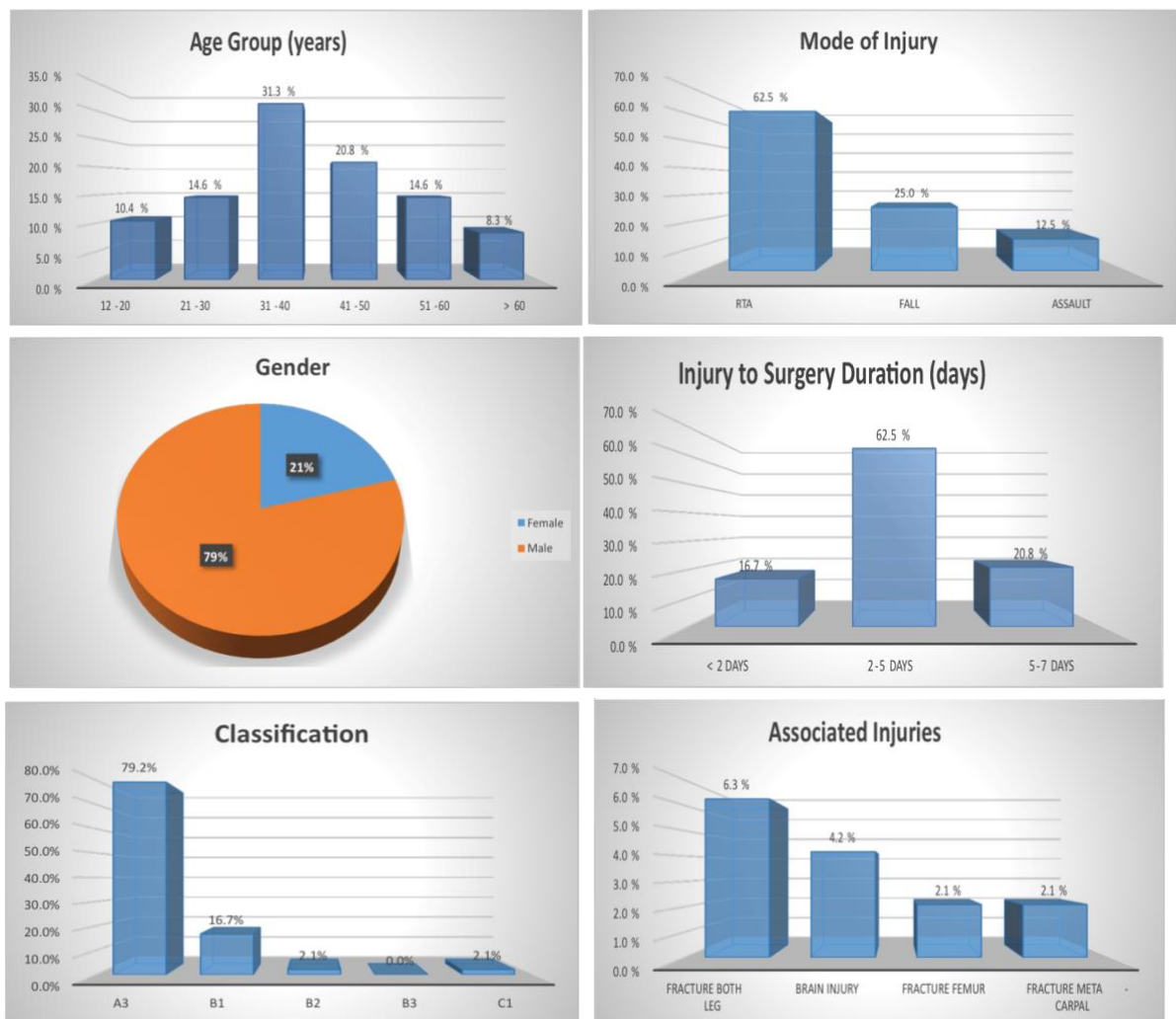
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Parameter	Mean	Standard deviation
DASH Score	39.9	15.67
Elbow flexion (degree)	126.19	8.05
Elbow extension (degree)	1.90	16.31
Supination (degree)	85.22	14.37
Pronation (degree)	75.24	20.29
Wrist dorsiflexion (degree)	63.22	18.57
Wrist palmar flexion (degree)	68.49	24.78

RADIOGRAPHS



Fig 13a :preoperative



fig13b : follow up 1 month



Fig 13c: follow up 3 months



fig 13 d: followup 6 months

FOLLOW UP- CLINICAL PICTURES (operated side Right)



Fig:12a: wrist dorsiflexion



fig:12b :wrist palmar flexion



Fig 12c: elbow extension



fig 12d: elbow flexion



Fig 12e: supination

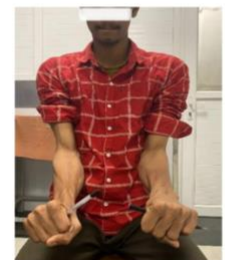


fig 12f: pronation

Results:-

The functional outcome as per DASH scoring system in dynamic compression plating (DCP) group was that 85 % (61 patients) had excellent results, 15 % (11 patients) had good results with no patient having fair and poor results.

Conclusion:-

Fixation with Dynamic Compression Plate has stood the test of time and provides excellent fixation. DASH is a widely accepted standardized scoring system to assess upper limb function. In comparison with few of the previous studies our results are better in terms of functional outcome.

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