ASSESSMENT OF HOOK PLATE IN FIXATION OF FRACTURES DISTAL CLAVICLE

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Introduction

Distal clavicle fractures represent a challenging subset of clavicular injuries due to their propensity for displacement and non-union. The treatment of these fractures has evolved over time, with various fixation techniques being proposed to achieve optimal outcomes. Among these, the clavicular hook plate has gained widespread acceptance for its ability to maintain anatomical alignment and provide stable fixation. This study was conducted to evaluate the clinical, radiological, and functional outcomes of distal clavicle fracture fixation using the hook plate technique, with a particular focus on union rates, complications, and postoperative shoulder function.

Aim of the Work

The primary aim of this study was to assess the efficacy and safety of hook plate fixation in the management of unstable distal clavicle fractures. Additionally, the study sought to compare the observed outcomes with previously published literature to identify potential advantages and limitations of this technique. By analyzing union rates, functional recovery, and complication profiles, the study aimed to contribute valuable insights into the ongoing debate regarding the optimal surgical approach for these fractures.

Subjects and Methods

This prospective study included a cohort of thirty patients who sustained unstable distal clavicle fractures and were treated with hook plate fixation at El-Hadra University Hospital. The inclusion criteria encompassed acute, displaced fractures classified as Neer Type II, while patients with associated acromioclavicular joint dislocations, pathological fractures, or previous clavicular surgeries were excluded. A comprehensive preoperative assessment, including clinical examination and radiological evaluation using X-rays and CT scans, when necessary, was conducted to confirm fracture classification and plan the surgical approach.

Results

The results of the study demonstrated a high rate of bony union, with all patients achieving radiological healing within an average period of twelve weeks. Functional outcomes were favorable, with the majority of patients attaining good to excellent scores on the UCLA shoulder assessment. The incidence of complications was minimal, with only a few patients of mild subacromial impingement, all of which resolved following timely plate removal. No patients of non-union, acromial osteolysis, or hardware failure were observed, further supporting the reliability of this technique.

Table 1: Distribution of studied patients according to postoperative UCLA (Function) score.

	Study Group (n= 30)	
	Number	**Percentage**
Postoperative UCLA (Function) Score		
+10 (Normal activities)	6	20.0%
+8 (Slight restriction)	15	50.0%
+6 (Most housework/shopping)	6	20.0%
+4 (Light housework)	3	10.0%

Data presented as numbers and percentages.

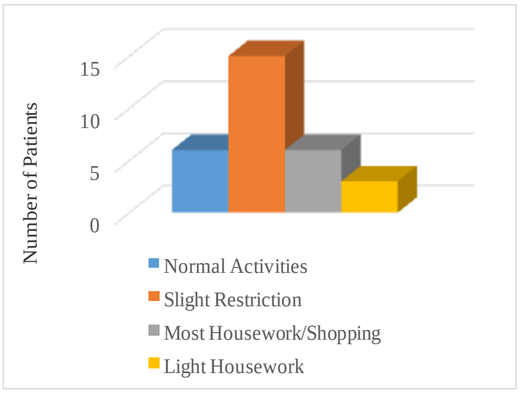

Figure 1: Postoperative UCLA (Function) score distribution among studied patients.

Conclusion

The findings of this study reinforce the effectiveness of hook plate fixation as a viable surgical option for the management of unstable distal clavicle fractures. The technique provides reliable stability, facilitates early mobilization, and results in high union rates with satisfactory functional recovery. While minor complications such as impingement may occur, they can be effectively managed with timely implant removal. Compared to alternative fixation methods, the hook plate offers distinct advantages in maintaining anatomical reduction and promoting successful healing. However, further studies with larger sample sizes and long-term follow-up are necessary to confirm these findings and refine surgical strategies for optimal patient outcomes.