

**Functional Outcome of Closed Reduction And K-Wiring With Modified Kapandji Technique For Distal Radial Fractures.**

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Abstract**Back ground**

Kirschner wire osteosynthesis is a widely accepted method for reduction of distal radial fractures. The present study aims to assess the Functional outcome of Closed Reduction and K-Wiring With the Modified Kapandji Technique for Distal Radial Fractures.

Introduction

Fractures of the distal radius amount to 16 % of all fractures treated in the Orthopaedic casualty(1) These fractures are increasingly common in the emergency due to greater vehicular traffic on road and rapid industrialization. They range from simple extra-articular to highly comminuted intra-articular fractures (1, 2).

In the distal end radius fractures which present with displacement, some loss of the reduction initially obtained will occur unless the case is adequately managed(3). Clinical guidelines from the American Academy of Orthopaedic Surgeons (AAOS) moderately recommend an anatomically stable surgical fixation, instead of cast fixation, to be followed by early wrist motion for treatment of patients with displaced distal radius fractures [4] Despite multiple types of osteosynthesis devices which are available today to aid the trauma surgeons in surgical fixation, Kirschner wires have their own place in treating fractures of

the distal extremity of the radius and still account as one of the most common method for fracture fixation, combined with plaster-cast immobilization.(5)

A key method of operative fixation is percutaneous pinning, which involves the insertion of Kirschner- (K-) wires through the skin to immobilize the fracture. The K wires can be inserted through multiple approach methods(6)

The surgical method described in the present study is a modification of the intrafocal fixation method that was described by Adalbert I. Kapandji.(7)

This method combines intrafocal and interfocal fixation by using one or two extra Kirschner wires either intrafocal or through the styloid process or by using non threaded wires (8,9) for fractures of the distal radius.

This method has several advantages. It allows early range of motion and is preferred in elderly patients with reduced bone quality.(10) The review of literature shows that the Modified Kapandji technique is effective, simple and has fewer complications.

Materials and Methods

Source of Data - Patients admitted in the orthopaedic ward in MGM Medical College and Hospital, Navi Mumbai.

Study Duration - August 2017 to August 2018 Sample Size - 30 patients who underwent closed reduction and K- wiring

with modified Kapandji's technique for distal radius fractures.

The study was conducted from August 2017 to August 2018, on 30 patients satisfying the inclusion and exclusion criteria as follows

Inclusion Criteria

1. All patients with fractures of the distal radius who were treated with percutaneous pinning in our hospital
2. Fracture not older than 2 weeks
3. Displaced fracture in cast
4. Patient willing for proposed surgery
5. They were able to understand the informed consent

Categories	Score	Findings
Pain (25 points)	25	No pain
	20	Mild pain with vigorous activities
	20	Pain only with weather changes
	15	Moderate pain with vigorous activities
	10	Mild pain with daily activities
	5	Moderate pain with daily activities
	0	Pain at rest
Satisfaction (25 points)	25	Very satisfied
	20	Moderately satisfied
	10	No satisfied, but working
Range of motion (25 points)	0	No satisfied, unable to work
	25	100% percentage of normal
	15	75-99% percentage of normal
	10	50-74% percentage of normal
	5	25-49% percentage of normal
Grip strength (25 points)	0	0-24% percentage of normal
	15	75-99% percentage of normal
	10	50-74% percentage of normal
	5	25-49% percentage of normal
Final result (total points)	0	0-24% percentage of normal
	90-100	Excellent
	80-89	Good
	65-79	Fair
	<65	Poor

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