Comparative Study between Kocher’s Method and External Rotation Method in Acute Anterior Dislocations and Fracture-dislocations of Shoulder

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Abstract

Background: Traditional technique-like Kocher’s method to reduce dislocation of the shoulder is painful to patient and associated with complications.

Aim: Aim of the present study is to compare external rotation reduction method with Kocher’s method in anterior dislocation shoulder.

Materials and Methods: A total sample 22 patients of anterior dislocations of the shoulder were treated in emergency department. Among 22 patients, on 12 patients Kocher’s method was tried. In 10 patients, external rotation method tried.

Results: Out of 12 patients in Kocher’s method, 9 patients were reduced under short general anesthesia (GA) and 3 patients were reduced in casualty without anesthesia. However, in external rotation method, 8 patients were reduced without anesthesia and 2 patients were reduced under short GA.

Conclusion: External rotation method is a safe and reliable method in acute dislocations of the shoulder that can be performed painlessly.

Key words: Dislocation, Rotation, Shoulder

INTRODUCTION

Traditional technique-like Kocher’s method to reduce dislocation of the shoulder is painful to patient and associated with complications.1–3

The new technique is a relatively safe and reliable. The aim of this study to compare pros and cons of new external rotation reduction method with old Kocher’s method in acute anterior dislocations and fracture-dislocations.4–9

MATERIALS AND METHODS

This study was conducted in the emergency department of the hospital during 24 months from September 2013 to September 2015, Kocher’s method tried in 12 patients and external rotation method in 10 patients.

Inclusion Criteria

Acute anterior dislocations and greater tuberosity fracture-dislocations of shoulder.

Exclusion Criteria

Polytrauma, hemodynamic instability, three- and four-part proximal humerus fractures, and glenoid fracture-dislocations. Delayed dislocation more than 24 h were excluded from the study.

History of patients was recorded. Previous attempts of reduction were noted. Comorbid data recorded. Written informed consent obtained. Preanesthetic evaluation was done in every patient. Method of reduction was planned, and short GA was needed if there was any difficulty in reduction in both methods.

Pain tolerance was recorded, and complications such as axillary nerve, vascular injury, and iatrogenic fracture were noted.
The diagnosis was confirmed by clinical examination and radiographic evaluation.

**External Rotation Method**

In supine patient, without any traction, the elbow was flexed 90° and arm was abducted to side of the chest. With shoulder in 10-20° forward flexion with grasped wrist, the shoulder was rotated externally until forearm in coronal plane.

Minimal force was given. Patients were given injection diclofenac 3 cc intramuscularly. Once reduced the arm rotated internally and kept across the chest.

**Kocher’s Method**

In supine patients, the arm was abducted and externally rotated. Traction was given. Once reduced arm was rotated internally and kept across the shoulder.

If reduction was difficult, short GA was administered in both methods.

Reduction was checked in post-reduction X-ray. Patients were immobilized in arm sling.10-11

**RESULTS**

About 22 patients were treated in period of 24 months from September 2013 to September 2015 in the emergency department.

Among 22, 12 patients were reduced using Kocher’s method, and 10 patients were reduced using external rotation method (Table 1).

Among 22 patients, 18 patients were male and 4 patients were female.

The case sheets of 22 patients who were treated with either of these two methods in the period between September 2013 and September 2015 were evaluated. The mechanism of injury was a simple fall, a fall from height, and road traffic accident. There were 18 male and 4 female patients. The mean age was 40 years (range, 20-60 years). 12 right shoulders and 10 left shoulders were involved. Among 22, in 20 patients, this was first dislocation of affected shoulder. Greater tuberosity fracture was associated with dislocation in 6 patients.

Closed reduction was achieved with the use of Kocher’s method in 12 patients (10 male + 2 female), and external rotation method in 10 patients (8 male + 2 female).

In Kocher’s method, 9 among 12 dislocations were reduced under short GA.

In external rotation method, 2 among 10 patients needed anesthesia for reduction. Totally, 5 patients had moderate pain.

Two patients had a history of recurrent dislocation of the shoulder which was reduced using Kocher’s method. The mean duration of hospitalization of 22 patients was
DISCUSSION

This study demonstrated the advantage of external rotation method of reduction in acute shoulder dislocation. This is reliable and safe while causing minimum patient discomfort and not requiring anesthesia in most of the patients. In Kocher’s method, the used traction increased muscle spasm and made reduction difficult without anesthesia.

So, this external rotation method is a rational, simple, and relatively pain-free method to reduce an anterior dislocation of the shoulder when compared to Kocher’s method.\textsuperscript{12-16}

CONCLUSION

External rotation method is a safe and reliable method in acute dislocations of the shoulder that can be performed painlessly.

REFERENCES


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