

ORIGINAL ARTICLE

## Comparison of Kocher and Modified Hippocratic Methods in Reduction of Anterior Shoulder Dislocation; a Quasi Experimental Study

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### Abstract

**Introduction:** Various methods have been designed for shoulder reduction and Kocher method (flexion, adduction and external rotation) and traction counter-traction are introduced as the oldest methods. Therefore, the present study was designed aiming to compare these two methods in reduction of anterior shoulder dislocation. **Methods:** This quasi experimental study was conducted on 16 to 60 year-old patients presenting to emergency department following anterior shoulder dislocation during 1 year. Patients underwent reduction via Kocher or traction counter-traction methods and were compared regarding reduction time, pain relief rate, success rate and neurological vascular complications. **Results:** 150 patients with the mean age of  $32.11 \pm 11.3$  years were randomly divided into 2 groups of traction counter-traction (67 individuals) and Kocher (83 individuals) (86.7% male). The 2 groups were similar regarding age ( $p = 0.52$ ) and sex ( $p = 0.679$ ). There was no significant difference regarding pain relief after reduction between the 2 groups ( $p > 0.05$ ). Mean reduction time was  $72.27 \pm 15.08$  seconds in the traction group and  $62.34 \pm 24.35$  seconds in the rotation group ( $p < 0.0001$ ). In addition, duration of hospitalization was  $3.00 \pm 0.48$  hours in traction group versus  $3.08 \pm 0.61$  hours in the other group ( $p = 0.382$ ). The frequency of failure in reduction cases was 1 (1.49%) in the traction group and 6 (7.22%) in the rotation group ( $p = 0.129$ ). Finally, 2 (2.40%) cases of mild injury of brachial plexus in the ulnar nerve path occurred in the rotation group and no neurological complication was seen in the traction group. **Conclusion:** According to the results of the present study, Kocher and traction counter-traction methods were similar regarding pain relief after reduction and total duration of hospitalization, but reduction time was shorter in Kocher method and treatment failure rate was reported to be higher in this method.

**Key words:** Shoulder dislocation; traction; rotation; dislocation; trauma

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