

## Effect of mid-range mobilization (MRM) and end-range mobilization (ERM) in subjects with adhesive capsulitis-A quasi experimental study

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**Background:** Adhesive capsulitis is a condition of uncertain etiology characterized by a progressive loss of both active and passive shoulder motion. Clinical features include pain, a limitation of Range of Motion (ROM) and muscle weakness from disuse. In many physical therapy programs, for patients with adhesive capsulitis of the shoulder, mobilization techniques are an important part of the intervention. This includes techniques given by Maitland done in different joint positions like mid-range and end-range which are effective in improving the mobility and functional ability of the patient when compared to conventional physical therapy.

**Objectives:** The purpose of this study was to compare the effectiveness of mid-range mobilization (MRM) with that of end-range mobilization (ERM) in subjects with adhesive capsulitis of the shoulder.

**Methodology:** 30 subjects were included in the study. They were equally divided into two groups. One group received MRM technique and the other received ERM technique. The duration of treatment was one month (6 days per week) in both groups. Subjects were assessed on the first day and the last day of the treatment session. Primary outcomes include active and passive ROM and shoulder Rating Questionnaire (SRQ).

**Results:** Overall, subjects in both groups improved over one month. Statistically significant change in scores for SRQ, ( $p < 0.001$ ) as well as active abduction ROM, passive abduction, active flexion, passive flexion, active external rotation, passive external rotation, active internal rotation ROM, and passive internal rotation ROM were found in the ERM group.

**Conclusion:** It is indicated that there is a significant difference between MRM technique and ERM technique in improving the mobility and functional ability in subjects with adhesive capsulitis of the shoulder. ERM was more effective than MRM in increasing mobility and functional ability of the shoulder.

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## Radial head replacement in the acute radial head fracture

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The radial head is the main stabilizer of the elbow if the coronoid process is fractured, the medial collateral ligament is incompetent, or the lateral ulnar collateral ligament is disrupted. Radial head replacement should be considered in the cases the radial is comminuted and irreparable particularly in the setting of associated fractures and ligament injuries of the elbow and forearm. This study aimed to analyze the clinical results after treatment of complex elbow injuries with modular anatomic radial head prosthesis (MARHP), along with ligament repair and fracture fixation.

**Materials and Methods:** Twelve radial head prosthesis were performed to treat traumatic elbow instability using MARHP (Acumed, Hillsboro, Oregon). All patients were retrospectively evaluated clinically and radiographically for a mean of follow-up of 29 months (range, 13-43 months).

**Results:** Patients recovered a similar range of motion between affected and unaffected elbows. Stability was restored to all twelve elbows, and 10 patients had a good or excellent result according to MEPI and DASH. Radiographic measurement revealed restored of a congruent elbow joint. Two patients had radiographic evidence of lucency around the neck of the prosthesis that was not associated with increased pain. Three patients had heterotopic ossification anterior to the radial neck.

**Conclusion:** The MARHP is effectively restoring stability and congruency to the elbow joint with comminuted and irreparable radial head fracture and valgus laxity. There was no evidence of arthritic radiocapitellar joint, capitellar osteopenia, significant proximal radial migration of the implant or any major complications. Outcomes were optimized by recognition and addressing the associated injuries.

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