

Manipulation Under Anaesthesia With Steroid Injection Vs. Arthroscopic Release for Frozen Shoulder - A Prospective Randomised Study

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Summary:

MUA with Steroid injection gave superior results in comparison to Arthroscopic Release for Frozen Shoulder.

Abstract:

Manipulation under Anaesthesia (MUA) with Steroid injection or Arthroscopic Release are established procedures for surgical management of Frozen Shoulder. However, there is no clear evidence whether or not one of these methods gives superior results.

The Aim of this study was to prospectively determine the functional outcome with each of these methods and to assess whether there is a significant difference in the functional outcomes from these 2 methods to suggest that one of them gives superior results. We hypothesized that both methods had similar outcomes.

After Ethics Committee approval, we performed a prospective randomized study between March 2009-November 2011. All male and female patients awaiting treatment for frozen shoulder were invited to participate in the study. The inclusion criteria were patients with idiopathic frozen shoulder, failed functional recovery with physiotherapy and patients who agreed to comply with regular postoperative therapy. We excluded patients with post-traumatic stiffness, recurrence following previous surgical treatment, associated pathology such as rotator cuff tear etc, patients who refused to participate in the study and patients who were unable to give informed consent. In addition, patients wishing to discontinue the study prematurely or those with any post-procedure complications such as infection, fracture, etc were excluded. Thus, 78 patients with mean age of 44.6 years formed part of the study. They were randomly allocated to one of the 2 treatment groups. Group 1 comprised of 33 patients who underwent MUA with steroid injection and Group 2 comprised of 45 patients who had Arthroscopic release. All procedures were performed by a single surgeon and results assessed by an independent observer unrelated to the study. The mean preoperative Oxford Shoulder score was 22.8 (SD 9.0) for group 1 and 24.2 (SD 7.3) for group 2 ($p=0.5$). The mean preoperative DASH score was 48.9 (SD 16.6) for group 1 and 48.9 (SD 16.4) for group 2 ($p=0.9$). The mean follow-up period was 14.6 months.

On analysis of results, the mean range of motion of both groups improved flexion 170 ± 7 , abduction 172 ± 5 , external rotation 77 ± 7 , internal rotation $T9 \pm 1$ ($p < 0.001$). The mean Oxford score improved to 44.1 (SD 3.7) for group 1 and 40.9 (SD 7.8) for group 2. The mean DASH score improved to 9.8 (SD 9.8) for group 1 and 18.4 (SD 21.2) for group 2. The follow-up Oxford and DASH scores for group 1 were superior to group 2 ($p=0.03$) and ($p=0.04$) respectively.

In conclusion, MUA with steroid injection and Arthroscopic release showed significant improvement in patient outcome. In addition, in our study, MUA with steroid injection gave statistically superior results in comparison to Arthroscopic release for Frozen shoulder.