

The Efficacy of Conservative Management for Primary Glenohumeral Osteoarthritis

Molly Piper¹, Kira Smith¹, Maggie Sinkler, Ethan Harlow, Lucas Haase¹, Raymond Chen¹, Robert J Gillespie

¹University Hospitals Cleveland Medical Center

INTRODUCTION: Glenohumeral osteoarthritis (GHOA) is a common cause of shoulder pain and function limitation in patients. Conservative management of GHOA consists of lifestyle modification and an exercise program in addition to nonsteroidal anti-inflammatory drugs (NSAIDs). Corticosteroid injections are also utilized in patients with persistent pain. When conservative management fails, surgical options can include both shoulder arthroscopy and arthroplasty. The purpose of this study is to evaluate the efficacy of conservative management in patients with GHOA.

METHODS: Patients with a diagnosis of GHOA pursuing conservative treatment were prospectively enrolled. Patient-reported outcome measures (PROMs) were recorded at the initial visit and 6- month follow-up visit. PROMs included American Shoulder and Elbow Surgeons (ASES) score, Single Assessment Numeric Score (SANE), and Visual Analog Scale (VAS). Patients were asked to fill out a survey at their initial visit regarding their expectations of the conservative treatment of their shoulder GHOA. Patients participated in home or formal physical therapy exercises. At the 6-month follow-up visit, patients completed PROMs and an outcomes survey evaluating whether their expectations of the treatment of their shoulder GHOA from the initial visit have been met. Range of motion was also collected. Statistical analysis included basic descriptive analyses, paired t-test for comparisons of continuous variables, and chi-square for comparisons of categorical variables.

RESULTS: There were 39 patients with a minimum of 6 months follow-up with a mean age of 70.5 ± 6.3 years, and 62% of these patients were female (n= 24). 69% of patients had never participated in supervised or home physical therapy for their symptomatic shoulder (n= 27). There were no significant differences in ASES, SANE, or VAS scores when comparing baseline to minimum 6-months follow up [Table I]. There were also no significant differences in forward flexion or external rotation between baseline and minimum 6-months follow-up measurements [Table II]. Between the patients who strongly predicted symptom relief and those who were less likely to expect relief at baseline, there was no significant difference in reported relief from GHOA symptoms at a minimum of 6-months follow-up (p= 0.33). There was also no significant difference in patient expectations in terms of sleeping more comfortably or doing more yard or household activities from baseline to a minimum of 6-months follow up (p= 0.72 and p= 0.46, respectively).

DISCUSSION AND CONCLUSION: Conservative management of primary GHOA with formal or home physical therapy exercises does not significantly improve patient outcomes in a period of at least 6 months.

Table I. Patient-Reported Outcome Measures

	Baseline	Minimum 6 Months Follow-up	p-value
ASES Avg. (SD)	52.1 (13)	57.6 (17.2)	0.28
VAS Avg. (SD)	5.2 (2)	4.9 (2.6)	0.99
SANE Avg. (SD)	51 (17.9)	53 (16.2)	0.48

Table II. Functional Outcomes

	Baseline	Minimum 6 Months Follow-up	p-value
Forward Elevation Avg. (SD)	117.6 (29.6)	119.1 (29.9)	0.59
External Rotation Avg. (SD)	28.2 (20.6)	28 (18.1)	0.81