

# The natural history of nonoperative treatment of posterior instability in a high demand population

July 14 2022

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Nearly half of the patients who underwent six months of nonoperative management for isolated posterior glenohumeral instability required an

arthroscopic stabilization procedure, according to research presented today at the American Orthopaedic Society of Sports Medicine 2022 Annual Meeting.

Nonoperative [management](#) of posterior shoulder [instability](#) is common; however, there is limited data available to assess the path morphology of nonoperative management. This study aims to evaluate glenohumeral path morphology in shoulders with posterior glenohumeral instability treated nonoperatively.

To address this, Patrick K. Mescher, MD, Walter Reed National Military Medical Center, Bethesda, Md., and colleagues conducted a [retrospective review](#) of 90 patients from the Military Health System electronic medical record database with isolated posterior shoulder instability defined as an isolated posterior labral tear.

Non-operative management was defined as [physical therapy](#) for a minimum of six months. Patients who underwent non-operative management and subsequently had a repeat MRI of the initially injured shoulder were identified, and the two studies were compared to evaluate for changes in glenoid bone loss, glenoid morphology, cartilage injuries, and the presence of concurrent pathology.

The primary outcome was glenoid changes associated with failure of non-operative management. Secondary outcomes included evaluation of potential risk factors for failure of non-operative management including glenoid bone loss, glenoid version, and posterior humeral head subluxation.

Of the 90 patients examined, 42 (46.7%) patients failed a six-month trial of nonoperative management after being diagnosed with posterior glenohumeral instability and went on to receive an arthroscopic stabilization procedure. The failure group demonstrated a significantly

greater humeral head subluxation ratio than the cohort of [patients](#) who survived nonoperative management (0.65 +- 0.2 vs 0.62 +- 0.2; p = 0.0375). Of those who failed nonoperative management, only 17 had repeat MRIs for comparison with initial MRIs, which revealed a significantly more significant increase in glenoid bone loss (6.54 +- 1.59 vs 2.68 +-1.71; p = 0.00274). The mean time from index MRI and repeat MRI was 488 days (95% CI 317 to 658).

"Additionally, those who had repeat MRI on average 1.3 years later demonstrated greater glenoid bone loss when compared to the index MRI," Dr. Mescher reported.

**More information:** Conference: [am2022.sportsmed.org/am2022](https://am2022.sportsmed.org/am2022)

Provided by American Orthopaedic Society for Sports Medicine

Citation: The natural history of nonoperative treatment of posterior instability in a high demand population (2022, July 14) retrieved 23 April 2024 from <https://medicalxpress.com/news/2022-07-natural-history-nonoperative-treatment-posterior.html>

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