

Radiologic Severe Osteoarthritis is Related to Worse Clinical Outcomes after Arthroscopic Osteocapsular Arthroplasty in Primary Elbow Osteoarthritis for a Medium-Term Follow-Up: A Retrospective Cohort Study

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INTRODUCTION:

This study aimed to compare the clinical outcomes after arthroscopic osteocapsular arthroplasty (OCA) in the medium-term follow up according to the radiologic severity of primary elbow osteoarthritis (OA) and assess serial changes in clinical outcomes in each group.

METHODS:

Patients treated using arthroscopic OCA for primary elbow OA with a minimum 3 years of follow up, from January 2010 to April 2019, were retrospectively assessed for range of motion (ROM), visual analog scale (VAS) pain score, and Mayo elbow performance score (MEPS), preoperatively and at short- (postoperative 3 to 12 months) and medium-term (at least 3 years after surgery) follow ups postoperatively. Preoperative computed tomography was performed to evaluate the radiologic severity of OA using the Kwak's classification (Figure 1).

RESULTS:

Of the 43 patients, 14, 18, and 11 were classified as stage I, II, and III groups, respectively; the mean follow-up duration was 71.3 ± 28.9 months and mean age was 56.5 ± 7.2 years. At the medium-term follow up, stage I group had better ROM arc (I, $114^\circ \pm 14^\circ$; II, $100^\circ \pm 23^\circ$; and III, $97^\circ \pm 20^\circ$; $P = .067$), VAS pain score (I, 0.9 ± 1.3 ; II, 1.8 ± 2.1 ; and III, 2.4 ± 2.1 ; $P = .168$), and significantly better MEPS (I, 93.2 ± 7.5 ; II, 84.7 ± 11.9 ; III, 78.6 ± 15.2 ; $P = .017$) than stage II and III groups (Figure 2). During serial assessment, all clinical outcomes tended to improve at the short-term follow up. Compared to the short-term period, the ROM arc tended to decrease at the medium-term follow up while VAS pain score and MEPS overall did not show significant changes.

DISCUSSION AND CONCLUSION:

Arthroscopic OCA is a reliable treatment option for primary elbow OA at the medium-term follow up. According to the Kwak's classification, stage I generally shows better clinical outcomes than stage II and III at the medium-term follow up.

