Ten-year survivorship after knee arthroscopy in patients with Kellgren-Lawrence grade 3 and grade 4 osteoarthritis of the knee.

This study sets the standard for success of arthroscopic chondroplasty in arthritic knees. Logically, the worst (grade IV) joints had earlier replacement, but the "average" knee, after a recommendation by a surgeon to have replacement, lasted another 6 years or more! - Kelly Cunningham, MD

Abstract

PURPOSE: The purpose of this study was to document 10-year outcomes and total knee arthroplasty (TKA) rate after arthroscopic treatment of knee osteoarthritis and compare survivorship of patients with Kellgren-Lawrence (KL) grade 3 and 4 knees.

METHODS: Eighty-one knees in 73 patients (49 male, 32 female; mean age, 58 years; range, 37 to 79 years) that underwent an arthroscopic regimen for knee osteoarthritis between August 2000 and November 2001 were included in this institutional review board-approved study. The inclusion criterion was Kellgren-Lawrence (KL) grade 3 or 4 radiographic changes. A TKA had been recommended to all patients; however, none wished to undergo arthroplasty. All patients underwent arthroscopic treatment. Endpoint was defined as TKA for survivorship analysis. Outcomes were collected at a minimum follow-up of 10 years (Lysholm, Tegner, patient satisfaction, and WOMAC scores).

RESULTS: Of 81 knees, 7 were in patients who died and 2 in patients who refused to participate, leaving 72 knees available for follow-up. Follow-up was obtained for 95% of patients (n = 69). Forty-three knees (62%) were converted to TKA at a mean of 4.4 years (range 1.0 to 9.6) after index arthroscopy. Mean survival time was 6.8 years (95% confidence interval [CI], 5.9 to 7.6 years). Survivorship was 60% at 5 years and 40% at 10 years. Patients with KL grade 4 osteoarthritis were 5.3 times more likely to fail (95% CI, 1.3 to 23.4) than those with KL grade 3 (P = .012). Mean survival time for patients with KL grade 4 was 5.7 years (95% CI, 4.5 to 6.9), and mean survival time for those with KL grade 3 was 7.5 years (95% CI, 6.2 to 8.7) (P = .022). For 26 knees that did not undergo arthroplasty, the mean Lysholm score was 74 (95% CI, 67 to 80), the median Tegner activity scale score was 3 (range, 0 to 8), the median patient satisfaction with outcome was 9 (range, 1 to 10), and the mean WOMAC score was 18.5 (95% CI, 13 to 24) at 10 years of follow-up.

CONCLUSIONS: The mean survival time after arthroscopic treatment of osteoarthritis with a defined protocol was 6.8 years. Forty percent delayed arthroplasty for a minimum of 10 years. Patients with KL grade 4 changes in their knee had a higher risk of conversion to arthroplasty and a significantly lower mean survival time.

LEVEL OF EVIDENCE: Level III, retrospective comparative study. Authors: Steadman JR1, Briggs KK, Matheny LM, Ellis HB. Copyright (C) 2013 Arthroscopy Association of North America. Published by Elsevier Inc. All rights reserved.

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