

## Osteoarthritis and Knee Function at Minimum 10 Years after Surgery for Knee Dislocations

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### Summary:

A large number (42%) of patients develop OA 10 years after surgical treatment of knee dislocations

### Abstract:

**Purpose:** Long term outcomes and the prevalence of osteoarthritis after surgical treatment of knee dislocations is lacking in the literature. The purpose of this study was to investigate the prevalence of knee osteoarthritis and knee function at a minimum of 10 years after knee dislocation surgery.

**Methods:** Sixty-five patients surgically treated for knee dislocations at a single level I trauma center between May 1996 and December 2004 were evaluated at a minimum of 10 years. Patients were evaluated with radiographs for knee osteoarthritis using the Kellgren-Lawrence (KL) grading system, Tegner activity score, Lysholm score, IKDC-2000, KOOS, subjective stability on physical examination, KT-1000 arthrometer and single-leg hop tests. Osteoarthritis was defined as KL grades 2 or greater.

**Results:** The median follow-up time was 12.7 years (range: 10.0 years – 18.8 years) and the median age was 46.9 years (range: 26.8 – 76.1 years). Radiographic osteoarthritis was present in 42% (23%, 14% and 5% in KL grades II, III and IV respectively) of the patients in the operated knee compared to 6% in the uninjured knee. Knee function was generally improved with a median Tegner activity score of 4 (range: 1 – 8), an average Lysholm score of 84 +/- 17 and an average IKDC-2000 score of 73 +/- 19.

**Conclusion:** Twenty-seven patients (42%) developed OA 10 years after surgical treatment of knee dislocations. Patients reported improved knee function and minimal to moderate pain. Age at surgery was a predictor of development of OA, with more patients >30 years at the time of surgery developing OA. Meniscal and cartilage injuries at time of surgery were not associated with development of OA. Patients being treated for knee dislocation should be counselled about the increased long-term risk of post-traumatic OA.

**Key terms:** Knee dislocation, knee, multiple ligament knee injury, osteoarthritis