

Radiographic joint space narrowing in osteoarthritis of the knee: relationship to meniscal tears and duration of pain

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摘要

Abstract

Objective The objective of this study was to assess, with knee radiography, joint space narrowing (JSN) and its relationship to meniscal tears, anterior cruciate ligament (ACL) ruptures, articular cartilage erosion, and duration of pain in patients with knee osteoarthritis.

Materials and methods A total of 140 patients who had knee osteoarthritis and underwent primary total knee replacement (TKR) surgery, with unicompartmental medial tibiofemoral JSN (grade 1 or greater) and normal lateral compartments, were recruited. Polytomous logistic regression was used to assess the relationship between JSN and risk factors.

Results All patients with JSN were categorized as grade 1 (n=14, 10.0%), grade 2 (n=64, 45.7%), or grade 3 (n=62, 44.3%). Women presented with indications for a TKR at a younger age than men (mean age, 69 vs 73 years, $P<0.05$). There were 123 (87.9%) meniscal tears and 58 (41.4%) partial (insufficient or attenuated ACL fibers) and 10 (7.1%) complete ACL ruptures; 115 of 134 (85.8%) patients had moderate to severe cartilage erosion. A higher grade of JSN was correlated with a higher frequency of meniscal tears [odds ratio (OR) 6.00, 95% CI 1.29-27.96 for grade 2 vs grade 1 JSN] and duration of knee pain (OR 1.25, 95% CI 1.01-1.53 for grade 3 vs grade 1 JSN). A higher grade of JSN was not correlated with a higher frequency of ACL rupture or articular cartilage erosion.

Conclusion A higher grade of JSN is associated with a higher frequency of meniscal tears and long duration of knee pain in patients with knee osteoarthritis.