

Pain reduction after first-line intervention for hip and knee osteoarthritis is associated with lower probability of progression to joint replacement within 5 years. A register-based study with 44 588 patients.

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Background and purpose: First-line intervention for patients with hip and knee osteoarthritis (OA) includes education, exercise, and weight control and aims to reduce pain and improve function. If not successful, joint replacement can be considered. The aim was to investigate the association between change in pain after 3 months participation in a first-line intervention and progression to joint replacement.

Methods: This observational study used data from the Swedish Osteoarthritis Register, which were linked to the Swedish Arthroplasty Register, Statistics Sweden and the Prescribed Drug Register. The primary prognostic factor was change in pain measured on a numeric rating scale (0-10). Main outcome was progression to joint replacement surgery within 5 years. Multivariable Cox regression analyses, with adjustment for baseline variables, were used to investigate the effect of change in pain on probability to progress to replacement surgery.

Results: Pain reduction was associated with a lower probability of progression to surgery for both hip (Hazard Ratio (HR): 0.4, 95%CI; 0.4-0.5) and knee OA (HR: 0.5, 95%CI; 0.4-0.5), while patients who increased their pain had a greater probability (hip, HR: 1.9, 95%CI; 1.7-2.1) (knee, HR: 1.7, 95%CI; 1.5-2.0).

Interpretation: Progression to joint replacement is influenced by change in pain intensity after participating in first-line interventions for hip and knee OA. A majority of patients with OA do not seem to require surgery within five years after participation in first-line interventions, especially in patients with knee OA.