

Development of radiographic knee osteoarthritis in individuals with knee pain – a two-year follow-up

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Background: Enhanced knowledge of the development from early-stage knee osteoarthritis (KOA), identified by symptoms and clinical examination, to radiographic KOA (RKO), may enable earlier start of first-line treatment. The aim was to study the development of radiographic knee osteoarthritis in individuals with knee pain over two years, and the associations between radiographic changes and baseline variables.

Methods: This study is part of a longitudinal cohort, Halland Osteoarthritis cohort (HALLOA) (1). Included 178 individuals, age 30-67 years, 67% (women) with knee pain, and no anterior cruciate ligament injury. Presence of RKO was defined as Ahlbäck score of ≥ 1 in ≥ 1 knee. Diagnose of early-stage KOA were based on clinical guideline from the National Institute for Health and Care Excellence (NICE) (2). Knee injury and Osteoarthritis Outcome Score (KOOS), pain intensity, physical function, body mass index (BMI) and visceral fat area (VFA) was measured. Associations were analysed with logistic regression.

Results: 13.5% developed RKO in two years. Deterioration to RKO were significantly associated with higher BMI and VFA, worse knee pain intensity, worse scores for KOOS Pain, and Symptoms at baseline (Table 1). Those with RKO (n=24) at follow-up all had early-stage KOA, according to NICE at baseline (Fig. 1).

Conclusions: One out of seven individuals with knee pain and early-stage KOA developed RKO already in two years. Variables associated with RKO can be detected early by using the NICE guidelines, assessment of obesity and self-reported data on pain and symptoms, to support first-line treatment: education, exercise, and weight-control.

References:

1. M. L. E. Andersson et al. HALLOA cohort profile. *BMJ open* 2022
2. The National Institute for Clinical Excellence. Osteoarthritis in over 16s: diagnosis and management. 2022.