THE PREVALENCE OF PATELLOFEMORAL OSTEOARTHRITIS: A SYSTEMATIC REVIEW

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Purpose: The patellofemoral joint has distinct structural, biomechanical and clinical differences from the medial and lateral tibiofemoral joints. However, it has not received adequate attention in research into knee osteoarthritis (OA), where it is rarely considered independently of the tibiofemoral joint. Previous reviews have investigated the prevalence of knee OA but did not report the compartmental distribution of OA in the knee joint. To date, there has been no synthesis of studies evaluating the prevalence of patellofemoral OA. This systematic review aims to determine the prevalence of radiographically confirmed patellofemoral OA amongst the general population and people with knee OA.

Methods: A search strategy was established, using terms associated with “patellofemoral OA”, “prevalence” and “clinical features”. These terms were used to search through Medline, EMBASE, CINAHL, SCOPUS, AMED and Web of Sciences (all databases) with no language restriction from database inception to August 2014. Duplicates were excluded, and two independent reviewers screened for eligibility. Studies were included if they reported prevalence of compartmental patterns of radiographic OA (patellofemoral and tibiofemoral OA) in a community or in a cohort of people with knee OA. Diagnosis of OA had to be conducted using a radiograph in accordance with American College of Rheumatology recommendations for the diagnosis of OA. Studies were excluded if they evaluated a targeted sample (e.g., occupation-specific participants) or repeated already reported data from the same cohorts. Data were extracted from studies that met the eligibility criteria. Prevalence numbers of patellofemoral OA were collated and quantitatively analysed.

Results: The search yielded 3834 records. After the initial screen, 126 full-text articles were assessed by two independent reviewers. The inclusion criteria were met by 23 studies that reported data on 10749 participants aged 20 years or more for the prevalence of radiographic knee OA. Whilst radiographic criteria were used by individual studies, their inclusion criteria for participant eligibility were mixed, varying from population and community-based samples (n=9 studies) to cohorts where all participants were experiencing knee pain (n=14 studies). Amongst the 9 studies that included samples from the general population aged 20 years or more, radiographic patellofemoral OA prevalence was present in 30.6% (1294/4230 participants). Findings from the 14 remaining studies that included samples with clinical and radiographic signs of OA identified patellofemoral OA prevalence to be 22.8% (1530/6707 participants) amongst participants aged 30 years or more.

Conclusions: This systematic review is the first to report the prevalence of patellofemoral OA amongst the general population as well as amongst people with knee pain. Findings from this review confirm the substantial prevalence of patellofemoral OA, demonstrating the need to consider the patellofemoral joint in research and clinical settings.