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"The Effectiveness of Corticosteroid injections in the time leading up to a Total Knee Arthroplasty"

Knee pain and disability associated with osteoarthritis (OA) of the knee affects up to 10% of adults above the age of 55 in the USA. Total knee arthroplasty (TKA) is the only curative procedure for knee OA. Therefore, much of the research and procedures focusing on knee OA has been aimed at pain management. Non-operative treatments include intra-articular (IA) injections of corticosteroids to reduce pain and inflammation. Although this is not a curative option, these injections can typically relieve pain for at least two weeks with some studies showing pain reduction for up to 16-24 weeks. The safety and effectiveness of frequent IA corticosteroid injections is of great concern to physicians and patients. However, when compared to normal saline injections, IA corticosteroid injections every 3 months for two years did not appear to cause significant destruction to the joint or narrowing of the capsular space and resulted in less pain.

There is limited data regarding the optimal dose and frequency of IA corticosteroid injections needed to maximally relieve knee OA pain without causing harmful effects. The major aim of this study is to investigate the relationship between the frequency of IA corticosteroid injections (number of injections per year) in patients with symptomatic knee OA and self-reported knee problems (using the Knee Osteoarthritis and Outcomes Score [KOOS]) assessed at the first IA corticosteroid injection and immediately prior to undergoing TKA. Additionally, we will examine the relationship between the frequency of IA corticosteroid injections the KOOS score and time to TKA. Lastly, we will examine the relationship between the frequency of IA corticosteroid injections and KOOS scores as well as the need for revision surgery 6 months after TKA to assess the safety of frequent intra-articular injections prior to TKA. Only patients who have undergone unilateral primary TKA and received at least one IA corticosteroid injection will be included in this study. Those who have received other types of injections including Hyaluronic Acid injections in addition to at least one IA corticosteroid injection will be included in a separate group of mixed type injections.