

Patient Preferences for Treatment of Knee Osteoarthritis

Fraenkel L, Bogardus ST Jr, Concato J, Wittink DR. Treatment options in knee osteoarthritis: a patient's perspective. *Arch Intern Med* 2004;164:1299–304.

Study Overview

Objective. To determine patient preferences for treatment of knee osteoarthritis and the determinants of these preferences.

Design. Prospective cohort study.

Setting and participants. 100 (84% participation rate) consecutive adult patients being followed in a rheumatology clinic for knee osteoarthritis.

Main outcome measures. Patient preferences were assessed using an interactive computer-based method termed “adaptive conjoint analysis,” which produced utility scores and assigned relative treatment preferences based upon information provided by patients. The primary outcome was treatment preference for nonselective nonsteroidal anti-inflammatory drugs (NSAIDs), cyclooxygenase-2 (COX-2) inhibitors, opioids, glucosamine or chondroitin sulfate, or topical capsaicin. The study also assessed the relative contributions of medication characteristics to treatment preferences, including dosing schedule, risks and benefits of therapy, and cost of therapy.

Main results. Adverse effects, including risk of ulcer formation, was the most important factor in patients' decisions about treatment of knee osteoarthritis. Adverse effects accounted for nearly 40% of the relative importance of all treatment-related characteristics, which also included chance of benefit (15%), time to benefit (14%), cost (12%), and route of administration (12%). Assuming patients pay the full cost of the medication, capsaicin (44%) was the preferred therapy for patients, followed by glucosamine (24%), opioids (23%), COX-2 inhibitors (7%), and NSAIDs (2%). Capsaicin continued to be the most preferred agent even when described as 3 times less effective than NSAIDs or COX-2 inhibitors. If patients had to pay a monthly copayment for medications, capsaicin (34%) still was the preferred treatment. No patients preferred NSAIDs for initial therapy if copayment was involved. COX-2 inhibitors (36%) became the preferred treatment only after being described as 3 times more effective than topical capsaicin (29%).

Conclusion. Topical capsaicin was the preferred treatment for knee osteoarthritis, reflecting the assignment of greater importance to avoiding adverse effects relative to gaining beneficial effects.

Commentary

Painful knee osteoarthritis is an extremely common condition, resulting in mild to moderate disability in up to 10% of adults over age 55 years [1]. Current guidelines for the management of knee osteoarthritis recommend a variety of drug therapies, beginning with acetaminophen and progressing to NSAIDs and COX-2 inhibitors [2].

The study by Fraenkel et al provides important insight into which drug therapies patients prefer after being given detailed information regarding medication dosing, administration, toxicities, and benefits. Despite the fact that topical capsaicin was described as much less effective than NSAIDs, it continued to be the preferred treatment for patients paying for drugs out of pocket. This effect likely is related to the importance of avoiding adverse effects, particularly the risks of ulcer formation associated with NSAIDs and COX-2 inhibitors.

The willingness of patients to sacrifice efficacy for safety is an important lesson for clinicians. While this study applies directly to treatment of knee osteoarthritis, the findings likely are applicable to treatment of osteoarthritis affecting other joints and perhaps to other chronic conditions.

It is important to note that the study population was relatively homogeneous, comprising over 90% whites, 80% females, and nearly 90% with a prescription drug plan. In addition, participants were older (mean age, 70 years) and had suffered from knee osteoarthritis for an average of 11 years. The majority of participants had been previously treated with 1 or more of the medications included in this study. Finally, this study assessed patient preferences for drug therapy and does not provide information on additional treatments, including physical therapy or surgical options.

Applications for Clinical Practice

Knee osteoarthritis is a common condition resulting in significant disease burden for the population. While a number of effective drug therapies are available, this study suggests

that patient desire to avoid adverse effects plays a relatively large role in overall treatment preferences. Physicians caring for older patients with osteoarthritis should carefully review all aspects of therapy before prescribing treatment for a given patient.

—Review by Thomas D. Sequist, MD

References

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2. Jordan KM, Arden NK, Doherty M, et al. EULAR Recommendations 2003: an evidence based approach to the management of knee osteoarthritis: Report of a Task Force of the Standing Committee for International Clinical Studies Including Therapeutic Trials (ESCISIT). *Ann Rheum Dis* 2003; 62:1145–55.

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