Drug treatment modalities in patients with chronic osteoarthritis of the hip or knee

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ABSTRACT

Objective: A survey was conducted to determine drug treatments taken by patients with chronic osteoarthritis (OA) of the hip or knee.

Methods: Data was collected at outpatient clinics at the Royal London and Newham University Hospitals, Bancroft Road, London between November 2001 and February 2003.

Results: Two hundred patients (mean age of 65.8 years, mean OA duration of 4.4 years) completed the survey; 175 with OA of knee and 25 with OA of hip. The majority of patients (64%) required a combination of drug treatments, either prescribed or self-medicated, to manage their disease. Of the total patients, 76% were taking paracetamol, 40% were taking an NSAID and 39% were taking complementary therapy (such as cod liver oil or glucosamine) either as monotherapy or in combination with other drugs. Of this patients 39% who previously used an NSAID had discontinued, primarily due to side effects, especially those of the gastrointestinal tract.

Conclusion: The survey results demonstrate that there is a need to individualize treatment for each patient, which is consistent with published recommendations for the management of OA.

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Expert guidelines from both sides of the Atlantic have consi programs stently recommended paracetamol as the initial oral drug treatment for osteoarthritis (OA).[1-5] This has been based on the excellent safety record of paracetamol relative to non-steroidal anti-inflammatory drugs (NSAIDs) and the absence of any significant clinical benefit of NSAIDs over simple analgesics. [6, 7]

Recent publications suggest that NSAIDs may be better than paracetamol for symptom relief in large joint (hip and knee) osteoarthritis. [8-11] However, most studies investigating the efficacy of drug treatment in osteoarthritis are short-term double-blind trials in highly selected populations.[6] Patients who demonstrate 'flare' (increase in pain) when their current NSAIDs are withdrawn, are recruited, resulting in selection bias to proven NSAID-responders. Other exclusion criteria such as only recruiting patients who can tolerate NSAIDs ensure a homogenous but unrepresentative study population. These studies, therefore, do not address the chronic, relapsing nature of the disease in a population of patients which is representative of 'every day' practice.

The objective of this research was to survey drug treatments for osteoarthritis used since diagnosis in a group of patients attending a hospital rheumatology clinic and determine if patient management in 'every day' practice is consistent with expert guidelines. The patient sample was representative of all patients who attended at the clinic.

Methods. Patients attending follow-up appointments (3-12 month intervals) at the rheumatology clinic at the Royal London and Newham General Hospitals between 1st November 2001 and 28th February 2003 were interviewed. They had originally been referred by a primary care physician. Patients with a clinical and radiological diagnosis of osteoarthritis of the knee or hip made by a consultant rheumatologist were included. Patients with a previous acute crystal or inflammatory synovitis, or with significant back pain or a chronic pain syndrome, were excluded from the study. Medication may have been prescribed by one of 7 consultant rheumatologists, 3 specialist registrars or patients' general practitioners. The study was approved by the local ethics committee and informed consent was obtained from the patients.

Clinical (including exercise programs and use of walking aids) and prescription data were obtained from patient medical records, using a standard data collection sheet. Self-medication data (including complementary therapy) were obtained by direct questioning of the patients. All interviews and data collection was performed by one of us. No attempt was made to examine the dosage regimen and effectiveness of the treatment used. All data were summarized descriptively.

Results. Two hundred consecutive patients agreed to be surveyed. The sample's demographic characteristics were similar to those previously reported for this area of London.[12] **Table 1** summarizes the demographic data of patients and their use of exercise programs and walking aids. Drug therapies (prescription and self-medication) recorded are displayed in **Table 2**.

Of the total patients 63.5% were taking more than one drug treatment and 2% patients were taking no drug therapy. Paracetamol was taken by 75.5% of patients and 39.5% of patients were taking a NSAID whilst 25.5% of patients were taking both paracetamol and an NSAID. Of the total patients 38.5% had previously taken NSAIDs and approximately half of these discontinued NSAIDs due to side effects, the majority of which were gastrointestinal side effects. After previously taking an NSAID, 28.5% of patients had reverted to paracetamol. No reasons for stopping paracetamol were recorded in 9.5% of patients who had previously used this drug.

Limited data were collected on the use of coxibs and meaningful comment on their discontinuation due to side effects cannot therefore be made. Thirty-nine

Table 1 - Summary of patients studied.

Demographic data	n (%)
Number of patients	200
Mean age (years)	65.8 (range 30-91)
Age range	30-91
Knee osteoarthritis	175 (45 male, 130 female)
Hip osteoarthritis	25 (4 male, 21 female)
Mean duration (years) of OA since diagnosis	4.4 (range 1-26)
Use of exercise program	
Physiotherapy	168 (84)
Self-exercise	88 (44)
Using of walking aid	63 (32)

OA - osteoarthritis

Table 2 - Drug treatment modalities.

Treatment	Current	(%)	Previous	(%)
Paracetamol	151 • 38 as monotherapy • 113 in combination with other drugs	(75.5)	19	(9.5)
NSAIDs (including coxibs*)	79 • 17 as monotherapy • 62 in combination with other drugs	(39.5)	77	(38.5)
Complementary therapy†	78 • 11 as monotherapy‡ • 67 in combination with other drugs	(39.0)	14	(7.0)
Other therapies				
Intra-articular steroid	34	(17.0)	66	(33.0)
Intra-articular hyaluronan	4	(2.0)	13	(6.5)
Amitriptyline				
Arthroscopic lavage	11	(5.5)	4	(2.0)
NSAID topical gel	1	(0.5)	22	(11.0)
	1	(0.5)	2	(1.0)
No drug therapy	4	(2.0)§	-	

*Sixteen patients took coxibs; 3 as monotherapy, 13 in combination with other drugs; 8 previous coxib users
†Mainly glucosamine and cod liver oil
‡Patients may have been taking more than one complementary therapy at the same time
§One of the patients on no drug therapy was receiving physiotherapy and one was self-exercising

percent of patients were currently taking and 7% had previously taken complementary drugs. Fifty percent had received intra-articular steroid injection and 11.5% had undergone arthroscopic lavage. Use of topical treatments (NSAID or capsaicin) was low at 1.5%. Most patients used exercise as part of their treatment programme; 16.5% of patients were receiving and 67.5% of patients had received physiotherapy. Patients subsequently progressed to self-exercise activities after receiving physiotherapy but compliance appears to be limited.

Discussion. This cross-sectional patient survey was a realistic investigation of treatments used for osteoarthritis over long periods of time. The survey provides information not only regarding current therapy but also past treatments for osteoarthritis of the knee or hip from the time of diagnosis. Although medical records were used to verify use of prescription medicines and hospital therapies, other treatments were recalled by patients and could therefore not be verified. Duration of use of each therapy was not recorded and full details of the benefits or side effects of treatments were not available.

Although there is evidence from short-term studies to demonstrate that paracetamol and NSAIDs are efficacious in the treatment of osteoarthritis symptoms, the outcome of these studies may not be representative of the long term treatment many patients require. There is therefore, a need for prospective clinical trials to establish the long-term safety and efficacy of paracetamol and NSAIDs in the treatment of osteoarthritis to be performed.

The survey was limited to a small sample size in 2 centers and drug use may have reflected hospital policy more than patient preference. The results should therefore be generalized in the context of the published literature. Two similar studies have reviewed drug treatment in osteoarthritis and rheumatic disease using patient surveys.[8,9] A telephone survey in 300 patients (172 with confirmed osteoarthritis) found that 30% of patients took both paracetamol and NSAID, drug continuation beyond 24 months was higher with paracetamol (33%) than with NSAID (19%) and that paracetamol was significantly less likely to be discontinued due to toxicity than an NSAID (3% and 31%, respectively).[8] However, although 24% of patients rated paracetamol as 'very helpful', 80% of patients rated NSAID rather than paracetamol as 'most helpful'. In the second study, 1799 patients with rheumatic diseases, of whom 668 had osteoarthritis, were surveyed.[9] Two thirds of patients had taken paracetamol and 37% of these found it to be moderately or very effective. Overall, considering both effectiveness and side effects, 25% of patients had no preference, 60% of patients preferred NSAIDs and 14% preferred paracetamol. Both our study and the studies reported above confirm previously reported high discontinuation rates of NSAIDs in patients with osteoarthritis.[13]

Our data show that significant disability is experienced by patients (73% of patients had at least some restriction of their activities due to osteoarthritis of the knee or hip) and those non-pharmacological interventions are as important as drug therapy in the management of osteoarthritis. Most patients require more than one drug treatment to manage their disease and many patients use self-medicated complementary drugs in addition to conventional medication. Long-term administration of NSAIDs often results in discontinuation due to side effects. Our finding that patients require multiple drug therapy for the relief of osteoarthritis pain is in keeping with other studies.[14,15]

In conclusion, we found that the results of our survey were consistent the findings of similar surveys conducted in the United States[8,9] and that 'every day' clinical practice was consistent with the published American and European recommendations for the treatment of osteoarthritis of the hip and knee. [1-5] There is a need to individualize drug treatment for each patient and the European League Against Rheumatism recommendations 2003 can be used as a framework for this.[3] Paracetamol can be used as the cornerstone of pain management , both as a first line therapy analgesic and as a foundation to which other treatments (such as NSAIDs, opioids) can be added if and when necessary.

Conflict of interests. *Dr. **Ali SM Jawad** has received reimbursements from Abbott, GlaxoSmithKline, Lilly, Merck Sharp and Dohme, Proctor and Gamble, and Wyeth for attending symposiums and speaking at educational meetings.*

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