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## Dutch General Practitioners' Management of Patients with Distal Osteoarthritic Symptoms

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Little is known about general practitioners' (GPs') policy with respect to patients with distal osteoarthritic symptoms. Therefore, the medical records of 196 patients with distal osteoarthritis were studied with respect to the GPs' management. In addition, 14 Dutch GPs' were interviewed on their management of patients with distal osteoarthritic symptoms. We found varying approaches with no consensus among GPs' and no relationship between their policies and GP, patient, or illness characteristics. We believe there is a need to develop a consensus on GPs' policy with respect to osteoarthritic patients, and to develop standards, based on research in general practice.

**Key words:** general practitioner, osteoarthritis, management.

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Osteoarthritis can be defined as a degenerative disease of the joints. In the affected joints there is a breakdown of the hyaline articular cartilage and a remodelling of the subchondral bone with sclerosis. These changes, seen at histopathology, lead to the characteristic radiological picture of joint-space narrowing, and bony sclerosis with subchondral cysts and marginal osteophyte formation. From the clinical point of view, osteoarthritis is a joint disease with main features such as pain, (morning) stiffness, and loss of function. Sometimes there is swelling of the joint (1-4).

Osteoarthritis is the most prevalent chronic joint disease (5), and in North America it is one of the most common chronic diseases (6). In a Dutch general population over the age of 55 years, approximately 30% of men and 53% of women have distal joint complaints (7). The number of known patients with osteoarthritic symptoms in a standard Dutch general practice (N = 2350) is about 68 (8, 9). In the United Kingdom, every year about 10% of the men and 30% of the women aged 65 or older consult their GP because of osteoarthritic complaints (10). Only a

small number of the patients with osteoarthritic complaints (about 3% in a one-year period) are admitted to a hospital (11). The socio-economic consequences of osteoarthritis are impressive. 30% of work-disability is related to all kinds of diseases of the musculoskeletal system. Within this category, osteoarthritic symptoms are the most frequent cause of loss of workdays and work-disability (12-14). Yelin et al showed that, compared with healthy controls, patients with osteoarthritis experienced significantly more loss of activity in household chores, shopping, and leisure (15, 16). Pain is a common problem in patients with osteoarthritis. The impact of osteoarthritic symptoms on the patients' quality of life, caused by (work) disability and by symptoms such as pain, is substantial (17).

Little is known about the GPs' current policy with respect to the management of patients with osteoarthritic symptoms. Furthermore, it is not clear what type of medical management is optimal for osteoarthritic patients in general practice. Although there are many recommendations about optimal GP management, these are usually not based on experi-

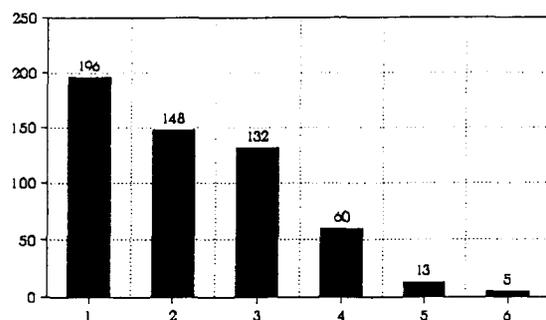


Figure 1. Distal osteoarthritic symptoms in the patient sample (N = 196).

- 1 pain
- 2 reduced physical performance
- 3 morning stiffness
- 4 swelling
- 5 warm skin
- 6 other symptoms, e.g. depression

mental data. Moreover, most of these have not been made by GPs (18, 19).

The aim of the present study was to describe the current policy of GPs with respect to patients with distal osteoarthritic symptoms. For this purpose, the medical records of 196 patients with distal osteoarthritis from 14 Dutch GPs were studied with regard to the GPs' management. The GPs were also interviewed about their actual management of patients with distal osteoarthritic symptoms. The provided data can be helpful in seeing whether there is a need to develop standards on GPs' policy with respect to patients with distal osteoarthritic symptoms.

#### PATIENTS AND METHODS

14 GPs in the Leiden area (13 male, 1 female, mean age 40) were each asked to supply a random sample of 14 records from patients they had diagnosed as having distal osteoarthritis (elbow, hip, knee and more peripheral).

The GPs' policy with respect to the management of distal osteoarthritis during the previous year was derived from these records and transcribed to a questionnaire. The questionnaire contained 5 topics: further examination (e.g. laboratory tests, X-rays); medical therapy; giving information and advice to the patients; referral; follow-up appointments. Missing data were provided by the GPs.

In addition, supplementary information was obtained directly from the GPs by means of a semi-structured interview according to the above mentioned list of topics. Furthermore, some GP, patient,

and illness characteristics were assessed (i.e. type of practice, age, sex, symptoms, number and location of symptoms, severity and duration of disease, frequency of consultation).

All quantitative variables were analysed dichotomously. We explored the relationship between the different components of the current policies and the measured GP, patient, and illness characteristics by performing Chi-Square goodness-of-fit tests. The qualitative information was analysed according to the 5 topics of the questionnaire.

#### RESULTS

##### Patients

The patient sample consisted of 196 records. The patients' mean age was 67 (SD 14.9; range 75; min: 17; max: 92); 47 (24%) were male and 149 (76%) female. The osteoarthritic symptoms of these patients are shown in Figure 1. All the patients had pain in at least one distal joint.

In further analyses, the patients' symptoms were divided in three groups: pain, pain + stiffness, pain + stiffness + swelling. The relation between reduced physical performance and start stiffness was rather high (chi-square = 16.3, df = 1, p = .0001), so a group of symptoms called "stiffness" was created. The relation between swelling and warm skin was also rather high (chi-square = 20.2, df = 1, p = .0000), so a group of symptoms called "swelling" was created. There were no patients with "swelling" without "stiffness".

The symptoms were most frequent in the knee (n = 93). In descending frequency this was followed by the hip (n = 83), and the hand and wrist (n = 49). The foot and ankle (n = 31) and the elbow (n = 12) were less often affected. Symptoms from the back and neck (n = 55), and shoulder (n = 41) were also encountered. On the basis of the exclusion criteria, patients with these diagnoses had at least two painful joints.

An X-ray was taken in 79% of the patients, in 85% of whom it confirmed osteoarthritis. The diagnosis therefore was not based only on symptoms in most of the included patients.

About 30% of the patients in this sample did not visit their GP for their osteoarthritic symptoms during the previous year. About 20% the patients consulted their GP once during this period. The other patients visited their GP on an average 3.6 times in a one-year period for their osteoarthritic symptoms.

Table I: GPs' policies (N = 139).

Further examination	(N=48; 34.5%)
– blood test	(N=17; 35.4%)
ESR	(N=13; 76.5%)
Hb	(N=12; 70.6%)
– radiology	(N=38; 79.2%)
Provided patient information	(N=71; 51.1%)
– about nature, cause and progression of osteoarthritis	(N=61; 85.9%)
– patient education	(N=23; 32.4%)
Medical therapy	(N=96; 69.1%)
– NSAID	(N=80; 83.3%)
– analgesics (paracetamol)	(N=20; 20.8%)
– homeopathic drug	(N=13; 13.5%)
– local corticosteroid injection	(N=12; 12.5%)
Referral	(N=67; 48.2%)
– to a physical therapist	(N=42; 62.7%)
– to a clinical specialist	(N=31; 46.3%)
Making a follow-up appointment	(N=36; 25.9%)
– a conditional appointment	(N=17; 47.2%)
– a term appointment	(N=12; 33.3%)
– a new appointment	(N= 7; 19.4%)

#### GPs' Policies

The frequencies of the five elements of the GPs' policy are shown in Table I. Because the questionnaire covered a one-year period, the GPs' policy is recorded for only 139 patients.

Further examination consisted of radiology and blood tests such as ESR and Hb. Medical therapy consisted of an NSAID, analgesics (paracetamol), a homeopathic drug or a local corticosteroid injection. The patient information provided was related to the nature, the cause, and the progression of osteoarthritis, and to education on exercise and dietary habits. GPs could refer their patients to a physical therapist or to a clinical specialist. Monitoring usu-

ally involved making a conditional follow-up appointment.

To validate the different aspects of the GPs' policies, a short analysis of the interviews will be given. With regard to patient history, in some cases it was the patient who provided the information; in others it was the GP who asked the questions. Some GPs performed a very limited, others a very extensive physical examination. Further examination varied from non-existent to extensive; from: "If patients are diagnosed as having osteoarthritis, it doesn't make sense to make any further investigations" to "Because it is easy to be wrong about symptoms, I always make a further investigation". Medical therapy was prescribed because a patient had a lot of pain "Most of the time the goal of the medical therapy is relieving pain", because a patient asks for it, or because a patient visits the GP. "Patients expect the GP to prescribe something". Providing patient information, prevention and advice was, for most GPs, part of their work. Some GPs referred their patients to physical therapy: "Physical therapy is less harmful than medical therapy". Others did not: "This provider of care is also unable to change the osteoarthritic symptoms". Sometimes GPs referred their patients to a medical specialist. If so, they referred for a second opinion or for surgical treatment. Most GPs thought that monitoring was not necessary: "Osteoarthritis is not a disease". Other GPs always monitored their patients when they prescribed medication. Another possibility was that the GP followed up this kind of patient because of the chronic nature of their symptoms: "For patients with a chronic disease it is important that they can tell you how they feel".

Table II: Relation between GPs' policy and patients' symptoms (N=139).

GPs' policy last 12 months	Patients' symptoms						
	Pain (N=6)		pain + stiffness (N=87)		pain + stiffness + swelling (N=46)		statistics
	count	%	count	%	count	%	Chi-Square
further examination	3	50.0	27	31.0	18	39.1	1.54, df=2, p=.46
provided patient information	3	50.0	41	47.1	27	58.7	1.62, df=2, p=.45
medical therapy	5	83.3	58	66.7	33	71.7	0.96, df=2, p=.62
referral	3	50.0	42	48.3	22	47.8	0.01, df=2, p=.99
making a follow-up appointment	1	16.7	26	29.9	9	19.6	1.95, df=2, p=.38

*Relationship between characteristics*

We analysed the relationship between different aspects of the policies and the measured patient or illness characteristics. We found no relationship, indicating that the policy of the GP is unrelated to characteristics of the patient or the disease and GP characteristics.

In Table II the relation between patients' symptoms and GP policy, the most important finding, is analysed. In this table the three groups of symptoms are related to GP policy. We conclude that there is no relation between patients' symptoms and GP policy.

## DISCUSSION AND CONCLUSIONS

This study shows that different Dutch GPs have different policies with respect to patients with distal osteoarthritic symptoms. Also, in one GP there is variation in policy not dependent on the patients' symptoms. Further, patients received medical care irrespective of their age, sex, number and location of symptoms, severity and duration of the disease. The chosen policy also seems to be independent of the GPs' characteristics. We suggest that the different cognitive rationales and attitudes of the GPs, presented in the illustration of the current policy, are mainly responsible for the choice of management. The very divergent rationales and attitudes of GPs result in very divergent policies.

Based on a comparison between the results of the Monitoring project and our results we conclude that the patients were selected randomly (8). In the Monitoring project 22% of the patients with osteoarthritis were male, in our study 24%. In the Monitoring project the percentage of patients aged 65 or over was 61.7%, in our study 61.2%. The number of encounters per patient per year was rather low. In our study we found an average of encounters per patient per year of 2.04. In the Monitoring project, the number of encounters per patient per year for osteoarthritis was 2.28 (8). In the Dutch National Study in General Practice the number of encounters per patient per year was about 2.89 (in general) (20). We conclude that patients with osteoarthritis have a low number of encounters per year.

Of course our results are based on a small number of GPs in a distinct area in The Netherlands. It is possible that associations would have been found in a larger study population between GP, patient or

illness characteristics and the actual policy. On the other hand, since the GPs in our study work in a distinct area, it might be expected that, if there was any consensus in policy with respect to patients with osteoarthritic symptoms, it would have spread among this group of GPs.

Our study was based on patients' symptoms as registered by the GP, which is an important characteristic of research in general practice. It is possible that the varying policies are caused by the diagnostic vagueness of osteoarthritis. However, osteoarthritis was confirmed by X-ray in most of the patients. Further, our two study methods give consistent results. Thus, our conclusion about varying GP policies with regard to patients with osteoarthritic symptoms seems justified.

It is not clear which type of medical management is optimal for osteoarthritic patients in general practice. Although there are many recommendations on optimal GP management, they are usually not based on experimental data, and most of the time they are not made by or for GPs (18, 19). The aim of this study was to provide an inventory from which we conclude that it is necessary to develop a consensus on GPs' policy with regard to osteoarthritic patients, and standards for it, based on research in general practice.

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