

CONCISE REPORT

Prevalence of rheumatic diseases in a rheumatological outpatient practice

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Objective: To assess the prevalence and distribution of rheumatic diseases in a community based rheumatological outpatient practice.

Methods: Rheumatological diagnoses of 3751 consecutive new and returning patients were recorded using a standard diagnosis form.

Results: 6264 rheumatological diagnoses were made in 3751 patients, of whom 1097 were newly referred; 69% of all patients were female. Inflammatory joint and spine diseases were diagnosed in 42% of all patients (including 5% with connective tissue diseases), soft tissue rheumatism in 37%, degenerative joint and spine diseases in 36%, and metabolic bone diseases in 17% of all patients. In new patients soft tissue rheumatism was most prevalent (51%), 45% had osteoarthritis, 24% had inflammatory joint and spine disease (including 2% with connective tissue disease), and 13% had metabolic bone disease. One of 10 new patients was diagnosed with definite rheumatoid arthritis. In returning patients the prevalence of inflammatory rheumatic diseases was higher (49%, including 6% with connective tissue diseases). 28% of the returning patients had rheumatoid arthritis. Osteoarthritis was present in 33% and metabolic bone disease in 19% of the returning patients.

Conclusions: Soft tissue rheumatism and degenerative joint and spine diseases are the most common rheumatological diagnoses in newly referred patients visiting a community based rheumatological outpatient practice. Inflammatory rheumatic diseases were most prevalent in returning patients.

Rheumatology is characterised by a large variety of diseases, not only inflammatory rheumatic and systemic diseases but also degenerative joint and spine diseases, soft tissue rheumatism, and metabolic bone diseases.¹ The broad nature of the rheumatological practice should be reflected in the rheumatology graduate training and the continuing medical education. We examined the prevalence and distribution of rheumatic diseases in a non-hospital based rheumatological outpatient practice, consisting of an association of four consultant rheumatologists, together working at the same location in a single city in Belgium. The referral population was both rural and urban. This study aimed at examining the rheumatic disease profile of patients visiting a community based outpatient rheumatology practice and comparing the prevalence and distribution of rheumatic diseases of newly referred and returning patients.

A number of published reports on the epidemiology and prevalence of rheumatic diseases seen in rheumatology practices are available, but only a few make a clear distinction between new or returning patients, academic or non-academic centres, and inpatients or outpatients.^{2–7}

METHODS

Rheumatological diagnoses of 3751 consecutive new and returning patients were recorded for one year (2000). A returning patient was defined as attending the practice regularly (once every 3–12 months). A standard diagnosis registration form was used (the standard diagnosis register (SDR) of rheumatic diseases).³ This included the identification of the patient, sex, date of birth, visit date, record of new referral or returning patient, and the different disease codes.

RESULTS

Patients were aged from 2 to 95 years, with a mean age of 54. Sixty nine per cent of all patients were female. Of the 3751 consecutive patients, 1097 (29%) were new patients. Newly referred patients were on average younger (mean 49.5 years) than returning patients (mean 55.5 years). Figure 1 gives a graphical representation of the age distribution of the patients. In a total of 3751 patients, 6264 rheumatological diagnoses were made, with an average of 1.7 diagnoses per patient.

Table 1 presents the distribution of the patients with their diagnoses separately grouped in the following categories: inflammatory joint and spine diseases, connective tissue diseases, degenerative joint and spine diseases, soft tissue rheumatism, and metabolic bone diseases. Multiple combination diagnoses for each patient were possible. The main diagnostic categories in all patients were inflammatory joint and spine diseases (42%, including 5% connective tissue diseases) and soft tissue rheumatism (37%). Thirty six per cent of all patients had a degenerative joint or spine disease. Metabolic bone diseases were found in 17% of all patients. The distribution of diagnostic categories in newly referred patients was different: soft tissue rheumatism was most prevalent (51% of the new patients), followed by degenerative joint and spine diseases (45%), inflammatory joint and spine diseases (24%, including 2% with connective tissue diseases), and metabolic bone diseases (13%). In the returning patients inflammatory joint and spine diseases were most frequently recorded (49%, including 6% with connective tissue diseases); the prevalence of degenerative joint and spine diseases and soft tissue rheumatism (respectively 33% and 31%) was lower in returning patients than in new patients. Nineteen per cent of the returning patients had a metabolic bone disease.

In the category of inflammatory joint and spine diseases, rheumatoid arthritis (RA) accounted for the greatest part, with 62% diagnoses in this group. In the category of connective tissue diseases, polymyalgia rheumatica was the most common diagnosis (45%). In the degenerative joint and spine diseases, there was a marked preponderance of osteoarthritis of the spine (50%), followed by hand osteoarthritis (15%),

Abbreviations: RA, rheumatoid arthritis; SDR, standard diagnosis register

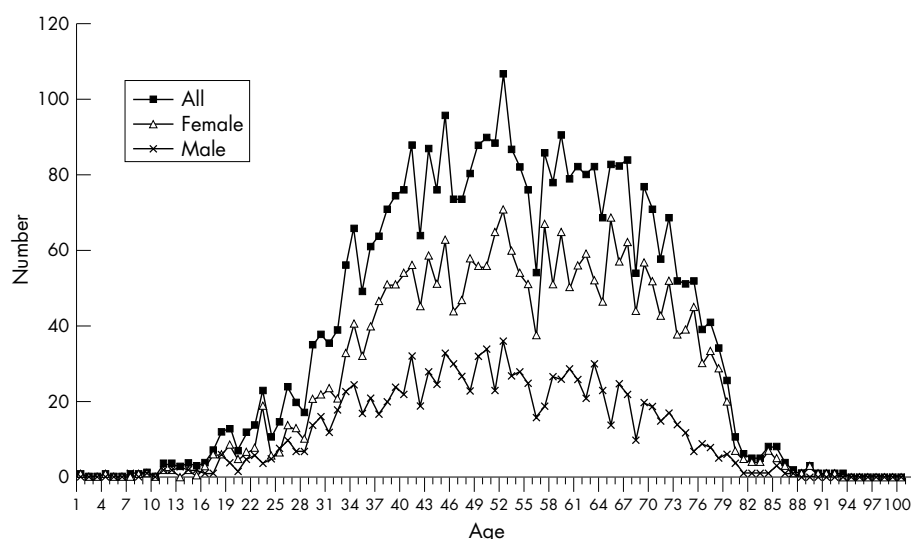


Figure 1 Age distribution of the patients.

Table 1 Distribution of patients and their diagnoses

Diagnoses*	Number of patients (n=3751)	% Of all patients (n=3751)	% Of new patients (n=1097)	% Of returning patients (n=2654)	Sex distribution (F/M)	Mean (SD) age (years)
Inflammatory joint and spine diseases	1379	37	22	43	1.6/1	52.8 (14.1)
RA	859	23	10	28	2.3/1	56.9 (12.4)
Spondylitis	161	4	3	5	1/1.5	43.0 (11.7)
Psoriatic arthritis	129	3	2	4	1.3/1	49.6 (12.9)
Gouty arthritis	55	1	2	1	1/8.2	52.7 (13.2)
Reactive arthritis	41	1	2	1	1/1.1	43.4 (16.8)
Connective tissue diseases	187	5	2	6	4.4/1	59.6 (16.3)
Polymyalgia rheumatica	89	2	1	3	3.9/1	72.5 (6.7)
Systemic lupus	33	1	0.4	1	15.5/1	41.0 (12.1)
Sjögren's syndrome	24	0.6	0.1	1	5.0/1	53.0 (12.5)
Degenerative joint and spine diseases	1362	36	45	33	2.2/1	55.9 (13.7)
Osteoarthritis of spine	928	25	29	23	2.3/1	56.9 (12.6)
Hand osteoarthritis	291	8	11	7	3.9/1	60.9 (10.5)
Hernia discalis	253	7	9	6	1.4/1	43.7 (11.9)
Knee osteoarthritis	187	5	6	5	2.7/1	65.4 (11.2)
Hip osteoarthritis	147	4	4	4	2.2/1	64.9 (11.8)
Soft tissue rheumatism	1388	37	51	31	3.2/1	48.6 (14.1)
Periarthritis scapulohumeralis	423	11	13	11	2.7/1	54.4 (12.6)
Fibromyalgia	386	10	9	11	5.3/1	45.7 (10.4)
Posture problems	281	7	15	4	3.1/1	40.4 (14.6)
Bursitis	159	4	7	3	8.4/1	54.5 (12.7)
Tendinitis	101	3	5	2	2.5/1	46.5 (14.3)
Metabolic bone diseases	637	17	13	19	5.0/1	64.5 (11.4)
Osteoporosis	607	16	12	18	5.7/1	64.6 (11.1)
Paget's disease	32	0.9	0.5	1	1.5/1	68.7 (11.3)

*Most common diagnoses in each category.

hernia discalis (13%), knee osteoarthritis (10%), and hip osteoarthritis (8%). Periarthritis scapulohumeralis (23%) and fibromyalgia (21%) were most frequently recorded in the category of soft tissue rheumatism.

Osteoporosis accounted for the vast majority (94%) of the diagnoses in the category of metabolic bone diseases, followed by Paget's disease (5%).

In all patients the top three diagnoses were osteoarthritis of the spine, RA, and osteoporosis. In new patients osteoarthritis of the spine was the leading diagnosis, followed by posture problems, periarthritis scapulohumeralis, and osteoporosis; RA ranked sixth in this group, with a definite diagnosis of RA in 1/10 new patients. In the returning patients, however, RA was the most common diagnosis (28% of all returning patients).

Seventy eight per cent of the new patients, analysed in a subgroup (n=130), were referred by doctors (96% general practitioners, 3% orthopaedic surgeons, 1% rehabilitation medicine). These referred patients had more inflammatory rheumatic diseases (23% v 9%), more soft tissue rheumatism

(53% v 44%), and more metabolic bone diseases (13% v 9%) than those visiting the practice on their own account. Osteoarthritis of the spine, analysed in another subgroup (n=100), was a secondary diagnosis in 75% of patients with this disorder and not the reason for visiting the practice.

DISCUSSION

Many newly referred patients were diagnosed with soft tissue rheumatism (51%) or degenerative joint or spine disease (45%), in contrast with the returning patients (respectively 31% and 33%). These data reflect the lower need for rheumatological follow up in these patient groups and the strategy of referring back to the general practitioner once a diagnosis of degenerative disease or soft tissue rheumatism is made; probably these patients were mainly referred for differential diagnosis. These data also indicate a greater need for undergraduate education about degenerative and soft tissue rheumatism in the training of general practitioners.⁸⁻¹¹ Inflammatory joint and spine diseases were diagnosed relatively more often in

returning patients (43%) than in newly referred patients (22%); the same was true for the group of connective tissue diseases (6% *v* 2%), reflecting the importance of rheumatological follow up of inflammatory rheumatic and systemic diseases. The diagnosis registration form was not designed to disclose the main reason for consultation, so a substantial number of diagnoses in the categories soft tissue rheumatism and degenerative joint and spine diseases are secondary diagnoses and not the main reason for (re)visiting the practice, partially explaining the great relative importance of these diagnostic categories in new and returning patients.

The leading diagnoses in all patients were osteoarthritis of the spine, RA, and osteoporosis. In the new patients osteoarthritis of the spine was the most common diagnosis (1/3 diagnoses). One of 10 new patients got a definite diagnosis of RA. RA was, however, the leading diagnosis in the returning patients.

Sheppard reported degenerative joint diseases in most of his new patients (33%) seen at a rheumatology clinic in a public hospital, but only 9% had soft tissue rheumatism.⁴ Inflammatory joint diseases, however, accounted in his survey for 29% (of new patients) and in the audit of Grahame and Woolf for 32% of new outpatients.⁵ A recent study of Boulos *et al* registered even more than 50% inflammatory rheumatic diseases in a community based rheumatology outpatient clinic, but no differentiation was made between newly referred and returning patients.⁶ These differences can possibly be explained by a different referral pattern rather than by differences in the rheumatic disease profiles of the studied groups. In the Netherlands an SDR of rheumatic diseases has been kept up now for several years; a report and preliminary analysis of this SDR was published by Miedema *et al*.³ Eighty eight per cent of the 56 445 registered patients were seen in non-university practices, resembling our own outpatient practice. The arthritis/spondylitis category was most important in all patients and, as in our study, in this category RA was most frequently recorded (more than 50%). The prevalence of soft tissue rheumatism (28%) and degenerative joint and spine diseases (18%) in the Dutch study was lower than in our survey. This may be owing to the Dutch patient referral system or to the fact that in the Netherlands degenerative joint and spine diseases are mainly referred to other specialists (orthopaedic surgeons or neurologists). In a recently published report of the national database of the German Collaborative Arthritis Centres, clinical and patient derived data of 25 653 outpatients showed that RA was the most common disease (51%) of all recorded inflammatory rheumatic diseases, as in our own study (62%). The prevalence of other inflammatory rheumatic conditions was markedly similar to our data.⁷

The great diversity of rheumatic diseases seen in a community rheumatology practice, not only dealing with complex inflammatory rheumatic conditions but also with a high number of degenerative and soft tissue rheumatic disorders, should have an impact on strategies for healthcare planning, education, and training. The high prevalence of degenerative joint and spine diseases and soft tissue rheumatism in newly referred patients may be an indication of a greater need for training of referring general practitioners in diagnostic and therapeutic skills for these rheumatic conditions.⁸⁻¹¹ It also emphasises the importance of focusing diagnostic skills in rheumatology graduate training on this group of rheumatic conditions. The rheumatology graduate training course should

therefore not only include rare, challenging and complex cases of inflammatory systemic or connective tissue diseases to follow up but should also expose the students and trainees to the "usual clinical practice". The training experience should include aspiration and injection of joints and soft tissue sites, diagnostic techniques such as bone and joint imaging by x ray and ultrasound examination, electromyography, and bone densitometry.^{6 12 13}

This study has a number of limitations. The SDR form was not designed to differentiate the dominant rheumatic condition from concomitant or secondary diagnoses. Moreover, the survey was based on the contribution of one group of rheumatologists, together practising in a single city in Belgium. Further studies and surveys are needed to determine whether the results of our study apply to other outpatient rheumatology practices.

We conclude that degenerative joint and spine diseases and soft tissue rheumatism form the most important part of the rheumatological diagnoses in newly referred patients visiting a community based outpatient rheumatological practice. However, inflammatory rheumatic diseases were most prevalent in returning patients.

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