Care pathways in early rheumatoid arthritis

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ABSTRACT

OBJECTIVE To determine the proportion of family physicians who diagnose rheumatoid arthritis (RA) correctly and to note how they report they would manage RA patients.

DESIGN Mailed survey (self-administered questionnaire) requesting comments on vignettes.

SETTING Province of Quebec.

PARTICIPANTS Computer-generated random sample of family physicians registered with the Quebec College of Family Physicians.

MAIN OUTCOME MEASURES The proportion of family physicians who recognized RA and their reported management strategies.

RESULTS Most respondents recognized the vignette presentation as a case of RA; 133/138 (96.4%) indicated RA as their provisional diagnosis, and all but 1 of the remaining respondents listed RA as a differential diagnosis. Of those who considered RA as a provisional or possible diagnosis, 107 (77.5% of all respondents) suggested referring the patient to a rheumatologist. Among the physicians who suggested referral, none indicated they would initiate disease-modifying antirheumatic drugs (DMARDs).

CONCLUSION Almost all respondents considered RA as a provisional or differential diagnosis. Although many suggested referring the patient to a rheumatologist, almost a quarter did not. Initiating DMARDs before referring patients to rheumatologists appears to be rare. Since DMARDs given during the early stages of RA are known to decrease damage and dysfunction, ways to increase their use and optimize care pathways for new-onset inflammatory arthritis are urgently needed.

EDITOR'S KEY POINTS

- Intervention for patients with rheumatoid arthritis (RA) is now possible through early use of disease-modifying antirheumatic drugs (DMARDs). The best opportunity for preventing damage and disability comes during the first few months of disease.
- Unfortunately, data suggest severe problems with timely access to care for patients with RA in Canada, including delayed access to DMARDs for patients with new-onset RA.
- This study aimed to determine the accuracy with which primary care physicians diagnosed RA and to describe their proposed management of RA patients, particularly regarding referral to specialists.
- Results showed that almost all respondents considered RA as a provisional or differential diagnosis in the case described. Although many suggested referring the patient to a rheumatologist, almost a quarter did not. Initiating DMARDs before referral appears to be rare.

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Rheumatoid arthritis (RA) is a progressive, painful, disabling disease that affects about 1% of the population. Intervention is now possible through early use of disease-modifying antirheumatic drugs (DMARDs).[1] The best opportunity for preventing damage and disability comes during the first few months of disease. Reports indicate better outcomes for patients who begin DMARD therapy early.[2-4] Optimal care of people with RA often hinges on early referral to rheumatologists. Quality of care and health outcomes are better for RA patients who have contact with relevant specialists[5] than they are for those who do not. Since Canadian family physicians function both as front-line caregivers and gatekeepers for access to specialists, they have an essential role in ensuring RA patients receive optimal care. Unfortunately, data suggest severe problems with timely access to care for RA patients in our country,[6] including delayed access to DMARDs for patients with new-onset RA.[7,8] Factors contributing to the problem include both family physicians' difficulties in diagnosing RA and barriers to optimal referral practices.

Our primary research objectives were to determine the accuracy with which family physicians diagnose RA, using vignette presentations, and to describe their proposed management of RA patients, particularly regarding referral to specialists.

METHODS

The survey was mailed to a random sample of family physicians in Quebec drawn from the mailing list of the Quebec College of Family Physicians.[9] This approach was based on the fact that simple random sampling strategies had been used in similar surveys where researchers were successful in producing samples whose demographic profiles reflected those of their target populations.[10]

From a computer-generated random sample of 600 physicians, we excluded those who were deceased (n=6), retired (n=53), or not actively practising family medicine for other reasons (n=99). We were left with 442 physicians potentially eligible to participate in our study. To be included, physicians had to be in active family practice at the location noted on the College's mailing list. We calculated that, if we had 125 to 150 respondents, our study would be powered to provide a point estimate of the percentage of physicians referring suspected RA patients to rheumatologists, with an appropriately narrow 95% confidence interval (within 15 percentage points), an alpha level of .05, and a beta level of .20.

Our survey was based on the methods used by Glazier et al[7,8] to assess family physicians' management of arthritis. Content was developed with input from family medicine, rheumatology, physiotherapy, and community health. Two unlabeled vignettes were presented: one showed a classic early RA presentation of subacute polyarticular swelling and stiffness for 2 months in a young woman, and the other showed uncomplicated mild osteoarthritis in an elderly man with chronic knee pain. For each vignette, physicians were asked to provide provisional diagnoses and differential diagnoses. Physicians were then asked to indicate their management strategy for each case. This could be done by filling in proposed actions on blank lines and by checking off options that included the following: a trial of nonsteroidal anti-inflammatory drugs (NSAIDs), laboratory investigations, radiologic examinations, treatment with prednisone, referral to a rheumatologist, and referral to physiotherapy or occupational therapy.

We used an adapted version of the Dillman method.[11] It included 2 follow-up mailings and follow-up calls to nonrespondents. During statistical analysis, we determined summary statistics for respondents' demographic characteristics and compared them with characteristics found in the College of Family Physicians of Canada's *National Family Physician Survey—Regional Report (Québec)*.[12] We calculated the percentages of respondents who recognized RA in the vignette and who chose various items for managing patients, including referral to a specialist. The study protocol was approved by McGill University's Research Ethics Committee.

RESULTS

Of 442 eligible physicians, 138 completed and returned the questionnaire for a response rate of 31.2%, which reaches or surpasses response rates of similar surveys.[13-17] Eighty-one (18.3%) of the 442 physicians refused to complete the survey, and the remainder did not respond at all despite repeated mailings and follow-up calls (**Figure 1**). The demographic and practice characteristics of respondents were similar to the characteristics of the entire population of Quebec family

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physicians (**Table 1**[12]). The demographic characteristics and practice locations of respondents were similar to those of nonrespondents.

The vast majority of respondents recognized the first vignette case as RA; 133/138 (96.4%) indicated RA as their provisional diagnosis, and all but 1 of the remaining respondents listed RA as a differential diagnosis. Of those who considered RA as a provisional diagnosis, 107 (80.5%) suggested referral to a rheumatologist (95% confidence interval 70.2 to 84.1). Of the 30 respondents who did not suggest referring the first vignette case to a rheumatologist, 28 indicated that they would order further laboratory tests and radiographs, 15 suggested another trial of NSAIDs, 6 indicated treatment with prednisone, and 1 suggested referral to a physiotherapist. Among the physicians who did not refer patients to rheumatology, none indicated they would start DMARDs; only 6 respondents among the entire sample mentioned the need for DMARDs.

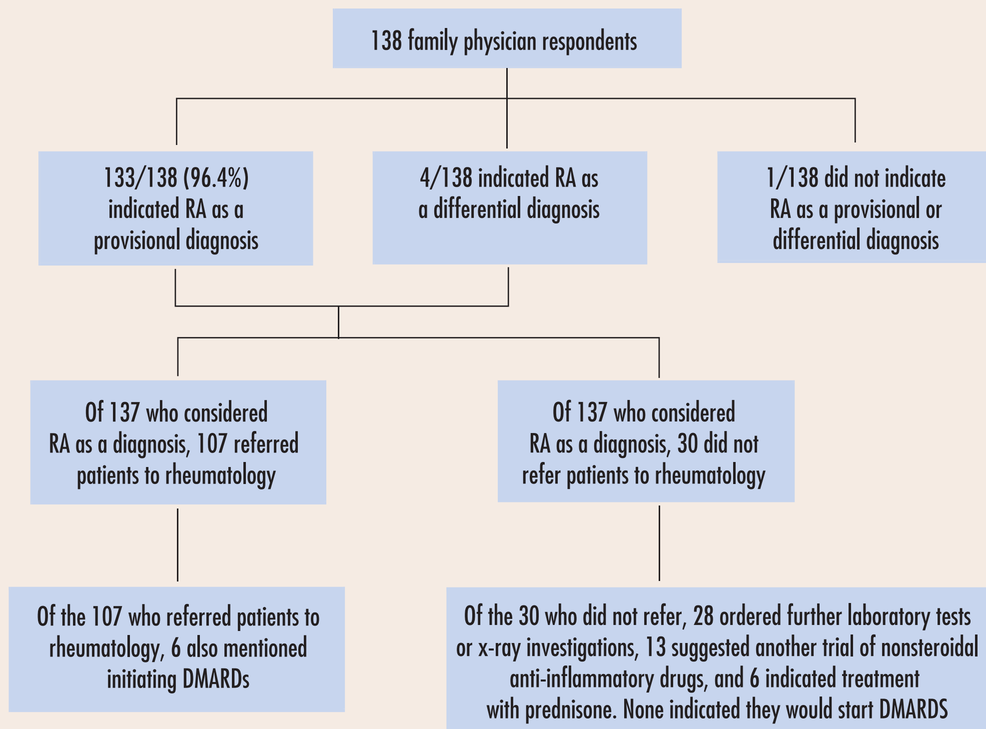
DISCUSSION

Results of our research update our understanding of how family physicians likely deal with patients presenting with symptoms of new-onset inflammatory arthritis. Most studies of this disease were done a decade ago.[7,8] Given the recent ground-breaking developments in RA treatment[1] and the fact that these treatments seem to work best if administered early in the course of disease, a re-assessment of the situation, evaluating diagnostic accuracy and referral behaviour, is long overdue.

Most respondents in our sample diagnosed the probable RA case appropriately. Though many suggested referral to a rheumatologist, almost a quarter did not. Initiating DMARDs before referral to rheumatology appears to be rare. Lacaille et al[6] studied referral rates and use of DMARDs in British Columbia and had similar findings, noting that most DMARDs were initiated by rheumatologists rather than by family physicians. In comparing self-reported rheumatology referral rates to administrative data reports, we suspected that actual referrals for new-onset RA were fewer than reported by our respondents.[18] Previous authors have indicated that, although self-reports can provide useful information, they should be interpreted with caution, keeping in mind that self-reporting sometimes exaggerates true behaviour.[19]

These findings cause great concern, since delay in DMARD treatment is associated with severe damage and dysfunction.[2] In an optimal care pathway for

Figure 1. Flowchart summarizing results of the survey on diagnosis of RA using a vignette case and self-reported management practices



DMARDs—disease-modifying anti-rheumatic drugs, RA—rheumatoid arthritis.

Table 1. Characteristics of survey respondents compared with all Quebec family physicians: *Mean age of respondents was 47.6 years (±9.5 years); mean age of all Quebec family physicians was 43.9 years (±8.7 years).*

CHARACTERISTICS*	RESPONDENTS %	ALL QUEBEC FAMILY PHYSICIANS %
Female	43	39
Urban practice	44	48
Practice setting†		
• Community clinic or health centre	26	21
• Private office or clinic	66	72
• Academic centre	12	10

Data from the College of Family Physicians of Canada.[12]
*For all characteristics, 95% confidence intervals for estimates overlap, indicating no evidence of important differences between survey respondents and all Quebec family physicians.
†The combined percentage exceeds 100%, as some respondents indicated more than one category.

new-onset RA, early referral and DMARD treatment are key.[4] Our results suggest that thousands of people with RA are being denied prompt treatment that could prevent disability. Recently, the arthritis community has tried to encourage early referral of patients with inflammatory arthritis, even if they do not have a definitive diagnosis. This has been acknowledged in "standards of care" put forth by the Alliance for a Canadian Arthritis Program at the national Summit for Arthritis Care and Prevention held in Ottawa in November 2005. At this summit, the standard of care relevant to inflammatory arthritis recommended that, once recognized, inflammatory arthritis should be considered an urgent condition requiring prompt appropriate treatment (including specialty referral).

Once they recognize a case of suspected RA, family physicians in large part determine the course of patients' care from that point forward. Because family physicians often do not see many patients with RA, they might not be aware of recent changes in optimal management and they might lack the experience to judge which DMARD should be prescribed for a particular patient. Our results suggest that many family physicians would order more tests, which could delay referral, even when a provisional diagnosis of RA has been made. In general, it might be appropriate to order tests to confirm a diagnosis or assign priority. Previous authors have raised concern over delays in definitive therapy (early DMARD treatment) that could arise when investigations are favoured over early referral.

The current system for referral to rheumatologists is a barrier to prompt initiation of DMARDs; waiting lists for rheumatologists in Quebec (and across Canada) are long, meaning that once patients are referred, further delays occur unless rheumatologists are alerted that the referral is for RA or suspected RA. To improve patient care, we believe patients with RA should be flagged by referring physicians, and these referring physicians should be aware that patients will be assessed promptly if rheumatologists are notified. Otherwise patients will continue to suffer unnecessarily.

In order to explore barriers to care and solutions, as the next phase of our research, we are working to identify the barriers that prevent timely access to appropriate care. We are conducting focus groups with patients, family physicians, specialists, and policy makers from across the province. Working with decision makers, our findings could then be used to inform current thinking on how to restructure delivery of care for chronic diseases, such as RA.

Limitations

Although we believe our survey respondents were representative of the family physician population in Quebec, our sample might have been biased toward respondents interested in musculoskeletal diseases. It could be argued that the results thus represent the "best-case scenario" in terms of current practice. Diagnostic accuracy in the entire family physician population (particularly among the subpopulation represented by the nonrespondents) might be more variable. As well, the actual practices of physicians might not be reflected in their self-reported behaviour. In fact, as mentioned earlier, administrative data suggest that rates of rheumatology referrals for new-onset RA (as identified by physician billing codes from outpatient encounters) could be lower than self-reported rates.[18] Our results, however, give us an opportunity to examine the "best-practice" care pathways provided to patients with RA by family physicians today.

Conclusion

Many of our respondents appropriately considered RA as the diagnosis in a case vignette. Though most suggested referring the patient to a rheumatologist, almost a quarter did not. Initiating DMARDs before referral to rheumatology is very rare. This suggests that thousands of people with RA are being denied prompt treatment; the cost in terms of subsequent disability is huge. Because DMARD treatment is known to prevent damage and dysfunction, our findings signal an urgent need for optimizing care pathways in early RA.

Contributors

Drs Bernatsky, Feldman, Shrier, Haggerty, Tousignant, *and* **Zummer,** *and* **Ms Toupin** *contributed to concept and design of the study; data gathering, analysis, and interpretation; and preparing the article for submission.*

Competing interests

None declared

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