
Early arthritis clinic: A USA perspective

J.J. Cush

John J. Cush, MD, Chief, Rheumatology and Clinical Immunology, Presbyterian Hospital of Dallas, Clinical Professor of Internal Medicine, The University of Texas Southwestern Medical School, 8200 Walnut Hill Lane, Dallas, Texas 75231-4496, USA. *Clin Exp Rheumatol* 2003; 21 (Suppl. 31): S75-S78.

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ABSTRACT

An early arthritis clinic (EAC) was established to identify early rheumatoid arthritis (RA) patients for clinical trials and to create a facile method of early patient referral from the practitioner to the rheumatologist. With minimal advertising and promotion, patients with less than 12 months of symptoms were easily referred if the primary care physician suspected a rheumatic condition. Of those patients who were appropriately referred one-third had synovitis, 20% had diagnostic cutaneous findings, 20% were diagnosed with lupus (or lupus-like disease), 12.5% had RA, and 10% were diagnosed with a spondyloarthropathy. An EAC was easily established, implemented and staffed and resulted in the prompt diagnosis and early treatment of many patients who may have otherwise waited months for appropriate rheumatologic diagnosis and treatment.

Introduction

Over the past decade, early diagnosis and treatment of rheumatoid arthritis (RA) has become a primary focus for rheumatologists worldwide. This call for a paradigm shift is rooted in a growing body of evidence that has underscored the disastrous consequences of untreated or poorly-treated inflammation and the apparent benefits of early aggressive treatment in RA patients. Thus, population-based studies of patients treated with conventional therapies have shown significant joint damage, progressive disability, increased morbidity and mortality – all of which are clearly linked to disease severity (1, 2). Moreover, many recent studies have demonstrated the importance of early referral, diagnosis and the initiation of appropriate disease modifying anti-rheumatic drug (DMARD) therapy in patients with early or DMARD-naïve RA.

Early diagnosis and referral

The challenge of early diagnosis and

intervention will not be overcome easily. The accuracy of early diagnosis may be problematic as many physicians rely heavily on serologic testing for diagnosis, even though these tests demonstrate low sensitivity in patients with early or new-onset disease. Moreover, reliance on the American College of Rheumatology (ACR) criteria for the diagnosis of early RA is hampered by the design of these criteria which include chronic manifestations of disease (such as nodules and radiographic erosions) to establish a diagnosis.

The poor performance of these criteria in patients with early onset disease has been documented (3). Symptoms and signs of new onset RA are non-specific, and as such many early arthritis clinics have shown that some patients with new onset synovitis may either remit or evolve into other acute or chronic inflammatory arthritides (4-6). Green examined a cohort of 63 patients with early RA and found that persistent symmetric disease for 12 weeks was the best predictor of progressive disease, followed to a lesser extent by the shared epitope for HLA DRB1 (5).

In addition to obstacles in diagnosis, patient access to rheumatologic consultation and care is very limited. In part this is due to a relatively small number of rheumatologists and a large RA population (2.1 million in the USA), many of whom have not been diagnosed or treated (~700,000). There exists in the USA a substantial reliance on primary care physicians to evaluate, screen and treat a large fraction of patients. In the USA, estimates suggest that there are nearly 4200 practicing rheumatologists. Studies indicate that most RA patients are referred from the primary care sector, thereby creating a rheumatology bottle-neck for referring physicians and patients with early disease.

Almost 10 years have passed since it was shown in a Massachusetts managed care organization that the median lag time from symptoms to diagnosis

was 36 weeks (7). In 1999, Irvine reported on a change in referrals in Glasgow, where the lag time from the first symptom to PCP referral was 21 months prior to 1986 and only 4 months in 1997 (8). Another recent report from Spain showed that although the median lag time from first symptom to rheumatology referral was 17 months, the time to DMARD initiation was 19 months, underscoring the common practice of prompt DMARD therapy by rheumatologists (9). Although there are trends showing a change in referrals and lag time to diagnosis or DMARD use, there remain a significant number of patients worldwide whose access to rheumatology care is limited, although this varies widely among countries, as is discussed in other chapters in this supplement.

Early DMARD initiation

Education of primary care physicians and rheumatologists alike on the benefits of early DMARD intervention are likely to influence referrals and/or DMARD use in early disease. However, many are unaware of the numerous studies that document the benefits of early intervention. A recent meta-analysis of 14 randomized controlled trials of conventional DMARDs underscored the importance of early DMARD administration, as DMARDs performed best when used early in disease (10). Other studies have shown the lag time to DMARD use to be critically important. Lard *et al.* demonstrated distinctly different outcomes for 2 cohorts with early disease (mean disease duration 4-5 months) (11). Whereas patients given early (median 15 days) DMARD (chloroquine or sulfasalazine) therapy had negligible radiographic change after 2 years, those with a delay (median 123 days) in DMARD initiation demonstrated significant radiographic progression over 2 years. In another monotherapy trial, the early use of either methotrexate or etanercept in patients with less than 3 years of disease (mean = 11 mos.) yielded impressive clinical and radiographic benefits in this population (12). While etanercept had a significant rapid onset of response, at the end of one year both drugs performed equally.

However, at 2 years etanercept yielded better ACR 20 responses and radiographic protection. Nonetheless, the early use of either agent yielded dramatically better radiographic outcomes when compared with expected rates of progression. Several studies have also documented the added impact of combination DMARD therapy when used in early or DMARD-naïve RA patients (13-15). These are but a few of the trials that show the long-term symptomatic, functional and radiographic benefits of early DMARD or combination DMARD therapy in RA patients.

Establishing an early arthritis clinic

Based on the benefits of early arthritis clinics elsewhere (16), we established an early arthritis clinic as part of our routine practice. In our community, access to rheumatologic consultation is generally delayed by 6-16 weeks. It has been our observation that primary care clinicians have limited time or interest in rheumatologic education and would instead prefer facile access to rheumatologic diagnosis and care for their patients. Thus our early arthritis clinic (EAC) was established with the following goals: (a) to provide easy access to both patients and referring clinicians for expert consultation; (b) to establish early and accurate diagnosis and initiate appropriate treatment for patients with symptoms of less than 12 months duration; and (c) to identify patients with early RA who express an interest in clinical trials.

A once weekly EAC was one of several measures designed to meet both community and research needs for greater access and information. Other efforts included quarterly free arthritis screening clinics, patient and physician educational forums on advances in rheumatic disease and a patient newsletter. The EAC was announced by mailing "Dear Dr." letters to 200 primary care physicians. This one-page letter included an attached, simple one-page referral fax form that detailed patient information, primary reason for referral and duration of symptom(s) (Fig. 1). EAC referrals required rheumatic symptoms of less than 12 months. Referral forms required review and approval by a

rheumatologist before appointments were established. Patients were generally seen within 1-2 weeks of referral. Clinic is held on Tuesday afternoon and usually 2-3 patients are evaluated at each EAC.

Over the last 6 months, nearly 50 patients were referred. Ten patients with symptoms from more than 12 months were mistakenly referred and evaluated. Three cases of fibromyalgia (FM) and 2 patients with a spondyloarthropathy (SpA) were diagnosed at their first visit and referred on to routine rheumatologic care.

The most common reasons for referral included abnormal serologic tests, polyarthritis, widespread pains, monarthritis, myalgia or fever of unknown origin. Only one-third of referrals included a suspected diagnosis and less than half of these were correct.

The majority of patients were female and ranged in age from 7 to 76 years. The mean duration of symptoms was nearly 16 weeks (range, 3-52 week). Patients were evaluated using a standardized assessment form that included a patient-derived questionnaire data and physician-derived historic and examination fields. There was no requirement for further laboratory or radiographic investigation, as these were done at the discretion of the rheumatologist. Over one-third of patients exhibited synovitis and 20% had diagnostic cutaneous findings.

The most common diagnoses included systemic lupus erythematosus or lupus-like disease (8 patients), RA/inflammatory arthritis (5 patients), FM (5), SpA (4), scleroderma (3) and osteoarthritis (3). Early inflammatory arthritis was found in 5 patients, 3 of whom were seropositive for rheumatoid factor. The disease duration ranged from 4 to 16 weeks. Treatment was initiated in all, 3 patients were started on DMARDs, 2 on TNF inhibitors and one patient (on NSAIDs alone) went into remission before returning for the follow-up exam. Over half of the EAC consults had a definitive diagnosis established on the first visit. Yet 10% of the patients remained without a rheumatologic diagnosis after repeat visit(s) and investigations.

EARLY ARTHRITIS CLINIC REFERRAL
(Patients must have "arthritis" for < 12 months)

Patient Name : _____ Age: _____

Referring Physician _____ Phone # _____ Fax # _____

Previously Seen a Rheumatologist? NO YES Whom: _____

Reason for Referral (Choose all that apply):

- ☐ Acute Pain
- ☐ Acute Swelling
- ☐ Chronic Pain
- ☐ Chronic Swelling
- ☐ Widespread Pain
- ☐ Affected Joints: Hand _____ Feet _____ Shoulder _____ Knee _____ Hip _____ Back _____
- ☐ +ANA (Result: _____ Pattern: _____)
- ☐ +RF (Result: _____)
- ☐ High ESR or CRP (Result: _____)
- ☐ Osteoarthritis
- ☐ Lupus
- ☐ Rheumatoid arthritis
- ☐ JRA (juvenile arthritis)
- ☐ Psoriatic arthritis
- ☐ Ankylosing spondylitis
- ☐ Gout or Pseudogout
- ☐ Fibromyalgia
- ☐ Low back pain
- ☐ Sjogrens syndrome
- ☐ Scleroderma
- ☐ Polymyositis/dermatomyositis
- ☐ Vasculitis
- ☐ Other: _____

Symptoms Began: _____ Diagnosis Date: _____

Please attach copies of labs, X-Rays, H&P, discharge summary, insurance information

Fig. 1. One page referral form used for the Early Arthritis Clinic.

When compared with established clinic patients or new patient referrals, EAC patients were younger, less likely to have FM and were taking fewer medications. Three patients with early aggressive RA were identified and treated aggressively. Many patients with serious rheumatic or autoimmune disease were diagnosed and begun on appropriate therapy. Lastly, two patients were referred into clinical trials. More importantly, the formation of an EAC was positively received and supported by the primary care physicians who utilized this service. Many commented that timely rheumatologic consultation fill-

ed a significant unmet need, and that the EAC was a valuable resource for their patients with new onset rheumatic complaints.

Recommendations

Despite extensive evidence concerning the importance of early diagnosis and treatment, this continues to be an unmet need for many patients with recent onset arthritis. Although many rheumatologists have embraced these tenets and have altered their therapeutic approach to early RA, limited access to rheumatologic care is partly to blame for this lacuna. A relatively small rheu-

matology workforce, already overburdened with requests for diagnostic and management service, will be greatly challenged by this need for Early Arthritis Clinics. EAC clinics may be easily implemented in academic or research environments. However, their utility in a routine rheumatologic practice remains to be determined as significant logistical and financial considerations must be taken into account before establishing a clinic dedicated to early arthritis. Future research in this area will need to:

1. Confirm or identify additional factors that identify high risk early arthritis patients.
2. Test treatment strategies (based on currently available therapies) with the hope of disease control or remission.
3. Study the impact of dedicated early arthritis clinics on routine rheumatologic practice.

Lastly, continued education on early intervention in RA should be directed at family physicians and rheumatologists alike, with the hope that education will alter referral or treatment paradigms in a manner that benefits those with early RA.

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