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## Complementary and alternative medicine use in rheumatoid arthritis: An audit of patients visiting a tertiary care centre

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### ABSTRACT

*Background.* Complementary and alternative medicine (CAM) enjoys widespread popularity in chronic illnesses such as rheumatic diseases. Rheumatoid arthritis (RA) is the commonest inflammatory joint disease seen in clinical practice. No systematic study on the use of CAM by patients with RA is available from northern India.

*Methods.* We evaluated the prevalence and usage

characteristics of CAM in Indian patients with RA using a questionnaire at a tertiary care centre in northern India.

*Results.* Of the 102 patients with RA included in the study, 39% reported current CAM use. As many as 84 respondents (82%) reported having tried CAM during the course of their disease. A total of 215 CAM courses were used, out of which 77 were being continued. Ayurveda was the commonest (28% courses) followed by homoeopathy (20%), yoga asana (17%) and *pranayama* (12%). Pain control was the primary reason for using CAM (69% of users). Most CAM therapies (78%) were started on the advice of friends and relatives. Discontinuation of CAM was attributed to lack of clinical benefit (78%) and adverse effects (10%). Of the patients using CAM, 87% did not reveal its use to their physicians, primarily because the physician did not enquire about it.

*Conclusion.* Patients with RA frequently use CAM for pain control. These practices are often not revealed to the treating physician. Knowledge of the concurrent use of CAM may serve to alert the physician about potential side-effects or drug interactions.

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### INTRODUCTION

Complementary and alternative medicine (CAM) has witnessed an increase in use in recent times not only in North America,<sup>1</sup> Europe<sup>2</sup> and Australia<sup>3</sup> but also in Asian countries<sup>4</sup> including India.<sup>5</sup> CAM is defined as a 'diagnosis, treatment and/or prevention

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which complements mainstream medicine by contributing to a common whole, by satisfying a demand not met by orthodoxy or by diversifying the conceptual frameworks of medicine'.<sup>6</sup> In India, alternative systems such as ayurveda, homoeopathy, Siddha and Unani medicine are supported by the Government of India.<sup>7</sup> CAM practices and modern, allopathic medicine run parallel to each other and may cater to the rural and urban populations, respectively, though not mutually exclusively.<sup>8</sup> In addition, other practices such as yoga *asana*, *pranayama*, massage, acupuncture and magnet therapy are also used in India. CAM therapies cater to a large proportion of the Indian population.<sup>8</sup> A stance of outright rejection adopted by many physicians often results in patients withholding all information about CAM use from the treating physician.<sup>1</sup> This is a source of major concern because of the high probability of drug interaction, especially in the case of orally administered drugs.<sup>9,10</sup>

We planned a prospective study to (i) find the prevalence of CAM use among patients with rheumatoid arthritis (RA) visiting a tertiary care rheumatology clinic, (ii) gather details of specific CAM practices followed by patients, and (iii) enquire about disclosure of CAM use to the treating physician.

## METHODS

A cross-sectional, questionnaire-based study was done at the Rheumatology Clinic, All India Institute of Medical Sciences, New Delhi. The patient population included adults with RA who gave informed consent to participate in the survey. Patients with RA and overlap with other diseases such as lupus, scleroderma, etc. were excluded from the study. The first two RA patients who visited the weekly clinic were interviewed by two of the authors (TZ and SA). Demographic details, disease characteristics such as age at diagnosis, seropositivity, radiographic erosions, etc. and CAM use were recorded in a structured questionnaire. Assessment of socioeconomic status was made using the modified Kuppuswamy scale for the urban population.<sup>11</sup> The disability index was calculated using the Modified Health Assessment Questionnaire, which has 12 questions pertaining to activities of daily living relevant to the Indian population.<sup>12</sup> The overall functional status was assessed using Steinbrocker criteria.<sup>13</sup>

CAM referred to all those health-related practices that were not based on or not prescribed by a medical practitioner affiliated to the allopathic system of medicine. In this study, we considered only those CAM practices which were taken exclusively for the treatment of RA. A patient was termed a CAM user if he/she had ever tried CAM for RA till the time of the study. A CAM non-user was defined as one who had never used any CAM therapy for RA or its sequelae.

Statistical analysis was done using the SPSS (Statistical Package for the Social Sciences) version 13.0 for Windows (SPSS Inc., Chicago, Illinois). Chi-square test was used for analysis of categorical variables. Student *t*-test was used for analysis of continuous variables.

## RESULTS

A total of 102 patients with RA (93% women) were studied from February 2006 to April 2007; 79% of the women were housewives. The mean (SD) age of the patients was 48.6 (12.0) years. About two-thirds of the patients were seropositive. A majority of patients (57%) had a Steinbrocker Class 2 functional status.

The current prevalence of CAM use in our study population was 39%, the all-time prevalence being 82%. A total of 215 courses were reported with 77 courses being used at present

(mean of 2.1 CAM courses per patient). As compared to non-users, CAM users had a significantly higher mean age (50.1 years *v.* 41.2 years;  $p=0.016$ ). CAM users had a longer duration of disease compared with non-users (12.27 years *v.* 9.16 years;  $p=0.059$ ), which was statistically not significant. There was no significant association between CAM use and gender, marital status, occupation or socioeconomic status of the patient. The commonly used CAMs by this study group in decreasing order of prevalence were ayurveda, homoeopathy, yoga *asana*, *pranayama*, massage, Unani and acupressure (Fig. 1). However, among the 77 CAM therapies being currently used, yoga *asana* was the most frequently employed followed by *pranayama*, massage, homoeopathy, ayurveda and acupressure. The mean duration (SD; median) in months for which different CAM therapies were used were as follows: yoga *asana* 37 (58.5; 12); *pranayama* 27.5 (59.5; 8) followed by homoeopathy 16.8 (30.6; 6) and ayurveda 16.2 (23.4; 6). Yoga *asana* and *pranayama* were the most frequently used currently and tended to be adhered to for a longer duration compared with ayurvedic and homoeopathic therapies ( $p=0.01$ ).

The most common reason for starting CAM use was control of pain. Up to 69% of CAM users reported initiation of CAM solely for this reason. The other reasons cited for initiating CAM therapy were pressure from family and contacts (11.9%), dissatisfaction with allopathic medicines (5.9%) and adverse effects of allopathic medicines (5.9%). It was observed that therapies such as yoga *asana* (84%) and *pranayama* (88%) were more often started after the institution of allopathic treatment. On the other hand, ayurveda (73%) and homoeopathy (72%) were more often started after diagnosis and before the initiation of disease-modifying drugs. Among CAM therapies, 83.7% of the yoga *asana* and 92.3% of the *pranayama* courses were being continued at the time of the study compared with only 6.7% of ayurveda and 13.9% of homoeopathy courses.

A majority of the CAM courses (78.1%) were begun on the advice of friends/neighbours/relatives. A trained CAM provider was identified for influencing the commencement of CAM therapies in only 21% of courses. The media influenced the adoption of 16% of CAM courses. Yoga *asana* and *pranayama* were often (52%) adopted based on media information. On the other hand, 75% of ayurveda and homoeopathy courses were taken up on the advice of close associates. At the time of the study, 138 CAM courses were reported to have been discontinued by the

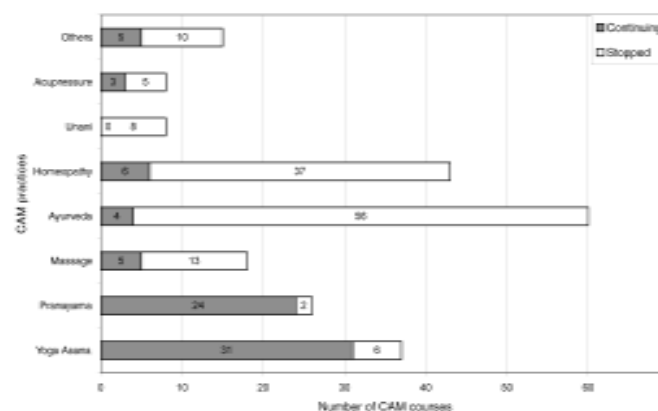


FIG 1. Distribution of use of complementary and alternative medicine (CAM). Numbers in data labels are numbers of courses in each category

TABLE I. Disclosure of complementary and alternative medicine (CAM) use by patients to their physicians

		Variables*	Response (%)
CAM revealers (n=23)	Reasons for revealing CAM use	Physician needs to know everything I am taking	57
		The physician asked	26
		Physician knows about interactions with prescribed treatment	4
		Physician may know whether CAM works	9
		To ensure documentation of CAM use in the medical record	4
	Physician's reactions to CAM revelation	Stop using CAM	41
		Continue to use CAM	29
CAM non-revealers (n=61)	Reasons for not revealing CAM use	Indifference	30
		Physician did not ask	83
		Forgot to tell the physician	9.3
		Used CAM before seeing the physician	2.3
		Feared that the physician would disapprove	4.6

\* Questions used for the variables of CAM disclosure were adapted with permission from Rao JK, Mihaliak K, Kroenke K, Bradley J, Tierney WM, Weinberger M. Use of complementary therapies for arthritis among patients of rheumatologists. *Ann Intern Med* 1999;131:409–16.

patients with lack of clinical benefit cited as the major reason for termination of 78% followed by adverse effects (10%). No adverse effects were ever reported with the use of yoga *asana* or *pranayama*.

The mean (SD; median) expenditure on CAM was calculated as Rs 793 (1761; 100) per month per course (movement-based therapies such as yoga *asana* Rs 38 [170; 0], *pranayama* Rs 0, ayurveda Rs 782 [1413; 400] and homoeopathy Rs 707 [1162; 200]).

Of the 84 patients who had ever used CAM, only 23 (27.3%) had revealed its use to the physician (Table I). The reasons for this and the reactions of the physician to the fact that they were using CAM are also summarized in Table I. A vast majority (87%) of those who did not reveal their CAM use to the physician said that the physician did not enquire about CAM use. Only 5% of patients did not inform their physician due to fear of disapproval. No association was seen between the physician–patient discussion of CAM use with female gender, college education or disease characteristics such as the functional status score, disability index and mean duration of disease.

## DISCUSSION

Our study reveals that CAM use by RA patients is very high. As many as 82% of the patients reported having ever used CAM; the current use of CAM in our study group was 39%. Prevalence rates varying from 28% to 90% have been reported from southern India,<sup>14</sup> Israel,<sup>15</sup> Europe,<sup>2</sup> Canada,<sup>16</sup> Mexico<sup>17</sup> and the USA.<sup>18</sup> Each of these studies, however, reveals a unique set of CAM therapies selected from a wide spectrum, viz. diet modification, ayurveda, homoeopathy, chiropractic, acupuncture, copper bracelets and occult spiritual therapies. Geographical, social and cultural influences make the ascertainment of the absolute determinants of use of a specific CAM therapy difficult. The most common reason cited by our patients for using CAM was pain control, which is in contrast to the findings of Chandrashekar *et al.*<sup>14</sup> whose patients used CAM because of the belief that modern medicine had no cure for RA and adverse reactions are rare with CAM.

We observed that yoga *asana* and *pranayama* were more often used as ‘add ons’ to various disease-modifying agents while ayurveda and homoeopathy were used as alternatives. This could be due to the fact that these movement-based therapies are usually perceived by patients to be virtually free of any side-effects, thereby resulting in a higher proportion of patients continuing these therapies for longer periods. Our study was done in a referral centre and patients visiting us may not be representative of the patients in the community.

Our study revealed a significant association of CAM use with age of the patient, which might be due to longer disease duration. Associations with either of these factors, however, were not detected by Rao *et al.*<sup>18</sup> Other correlates of CAM use such as graduate education, female gender, higher economic status, which were reported by Rao *et al.*<sup>18</sup> and Kaboli *et al.*,<sup>19</sup> were not detected in our study. Interestingly, as was the case in the study by Rao *et al.*,<sup>18</sup> our study too does not show any association between CAM use and activity of the disease.

One important observation was that the majority of CAM users did not reveal this to the treating physician. The most common reason for this was the lack of enquiry by physicians. Physicians were unaware of as many as 72.7% of the CAM courses used by their patients. This has also been noted by other investigators.<sup>18,19</sup> CAM use is an important consideration during initiation of disease-modifying drug therapies in patients, as several CAM therapies (especially oral drugs) may lead to adverse drug interactions. Currently, there is a paucity of information relating to the safety of CAM therapies.<sup>20</sup> It is likely that in the absence of such knowledge, some of the adverse effects due to CAM are wrongly attributed to disease-modifying drugs by patients, leading to inappropriate cessation of therapy. It is imperative for rheumatologists to routinely enquire about CAM use from their patients.

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