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MINIREVIEWS

Complementary medicine use in rheumatology: A review

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Abstract

Complementary and alternative medicine (CAM) use is increasing worldwide; specifically it appears that these treatment modalities are popular among rheumatology patients. The most commonly reported CAM therapies are herbal medicines, homeopathy, chiropractic, acupuncture and reflexology. Despite high reported rates of CAM use, the number of patients disclosing use to their rheumatologists remains low. This review highlights rates of current CAM use in rheumatology in studies performed worldwide, and discusses potential reasons for nondisclosure of CAM use to clinicians.

Key words: Complementary medicine; Alternative medicine; Rheumatology; Arthritis; Acupuncture

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Core tip: Complementary and alternative medicine is widely used among rheumatology patients, who often do not inform their consultants that they are using such therapies. This may reflect a fear that clinicians may not approve, or a lack of awareness that the information may be helpful in their management. Increased awareness of the issue, and better education of clinicians and patients is beneficial.

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COMPLEMENTARY AND ALTERNATIVE MEDICINE

Complementary and alternative medicine (CAM) was defined by Ernst *et al*[1] as "diagnosis, treatment and/or prevention which complements mainstream medicine by contributing to a common whole, by satisfying a demand not met by orthodoxy or by diversifying the conceptual frame works of medicine" Although the terms "com-

Table 1 Usage of complementary and alternative medicine in European Countries[17]

Treatment	Prevalence of reported use across Europe (%)
Herbal medicine	5.9-48.3
Homeopathy	2-27
Chiropractic	0.4-28.8
Acupuncture	0.44-23
Reflexology	0.4-21

plementary and alternative" are often used together, their meanings differ; according to the United States National Centre for Complementary and Alternative Medicine (NCCAM), "complementary" refers to using non-mainstream treatment alongside conventional medicine, to better cope with a health condition, whereas "alternative" means using non-mainstream treatment in place of conventional medicine to treat a health condition[2]. A "complementary therapy" may provide a patient with an experience that is pleasant in itself, and improves the patient's ability to cope with a chronic health condition; as the term implies, these therapies are designed to be used alongside conventional therapy. By contrast, an "alternative" therapy is designed to be use in place of conventional treatment. Few studies have examined the mechanism of action of these treatments, although some researchers have postulated an effect on immune function, and invocation of the placebo effect. Many therapies discussed here can be used in either way; homeopathy, acupuncture, chiropractic and osteopathy have been used within either a "complementary" or "alternative" framework.

CAM is often classified into 3 groups: (1) professionally organised alternative therapies such as acupuncture, chiropractic, herbal medicine, homeopathy and osteopathy; (2) complementary therapies, such as aromatherapy, massage, yoga, meditation, hypnotherapy, Alexander technique, shiatsu, reflexology and counselling stress therapy; and (3) alternative disciplines, for example, traditional Chinese medicine, traditional Indian medicine (Ayurveda), anthroposophical medicine, naturopathy as well as crystal therapy, dowsing, iridology and kinesiology[3].

Documentation of CAM use in rheumatology is important because of potential adverse consequences in some groups of rheumatology patients. For example, spinal manipulation applied by chiropractor therapists among rheumatoid arthritis (RA) patients with atlanto-axial instability may result in neurological complications[4]. In addition, herbal medications used in CAM may interact with prescribed rheumatology medications[5].

ROLE OF CAM IN RHEUMATOLOGY

There is some evidence to suggest efficacy of CAM in rheumatic conditions such as osteoarthritis (OA), RA and other types of arthritis[6-11]. In a recent systematic review that assessed the efficacy of CAM in the management of OA, capsaicin gel and S-adenosyl methionine were shown to be effective in improving pain in this group of patients[7]. Another study suggested that acupuncture and massage therapy were effective in reduction of OA related pain[6]. Finally, in other work administration of rosehip (herbal medicine) was associated with reductions in OA pain compared to placebo[8]. Macfarlane *et al*[9] recently undertook a study aimed to evaluate the evidence supporting or refuting CAM use in the treatment of RA and reported that borage seed oil and thunder god vine reduced symptoms in RA. Practising Iyengar yoga was shown by another group to have a beneficial effect on symptoms of RA[10]. Acupuncture has been demonstrated to be efficacious in crystal arthritis[11] . However, other studies have suggested that the evidence supporting the effectiveness of CAM in RA and OA is more doubtful[12]. Hence the literature around the efficacy of CAM in rheumatology is hotly contested, and studies that consider CAM use are often advertised widely and hence more readily available to patients. The efficacy of CAM in rheumatology is not the focus of this review, which aims rather to highlight the widespread use of these therapies in rheumatology patients.

PREVALENCE AND PATTERNS OF CAM USE IN RHEUMATOLOGY

The prevalence of CAM use in the general population is high according to studies worldwide[13-15]. The prevalence of CAM use is reported to be the lowest in England when compared to other European countries, United States, Australia and Japan[16]. The top 5 most commonly reported CAM therapies in the European Union are: herbal medicines, homeopathy, chiropractic, acupuncture and reflexology (Table 1)[17].

Specifically, CAM usage is popular in rheumatology[18]. Several studies have suggested a high prevalence of CAM use in North America and Australia in rheumatology patients[19-22]. The highest prevalence of CAM therapy use in rheumatology patients (94%) was reported in a study by Kronenfeld *et al*[19]. The 3 most popular modalities reported in this study were topical treatments, dietary modification and supplementary vitamins. In another survey of 232 rheumatology patients in the United States, two thirds had used CAM[20]. Chiropractic therapy was found to be the most popular and most helpful treatment modality. Patients who had OA were more likely to use CAM regularly. In another OA cohort of patients who were followed for 1 year, 44% of patients remained non-users throughout, whereas 12% started CAM, 22% maintained, and 22% stopped use of CAM[21]. Equal numbers of patients started and stopped using electric stimulators and visiting chiropractors during the study period. Although patients most frequently started herbal remedies, dietary supplements and special diets, a similar number discontinued these therapies, suggesting that use of

Table 2 Reasons for not disclosing usage of complementary and alternative medicine to rheumatologists

Physician did not ask
Patient thought it unnecessary to talk about it
Patient feared negative response from physician
Patient had used CAM before seeing physician
Patient forgot to discuss

CAM: Complementary and alternative medicine.

CAM is often transitory. Another study of RA patients found that nutritional supplements and touch therapies (massage, acupuncture and acupressure) were the most widely used in this patient disease group, with mind body techniques more prevalent among younger patients[22]. CAM modalities were found to be used in conjunction with mainstream conventional treatments in early as well as later stages of the disease. CAM usage is also popular among Canadian rheumatology patients; in a study of 235 rheumatology patients, 60% of them had ever used CAM remedies and 79% of these patients had used CAM remedies in the previous 12 mo. The study also found that 47% of these patients had tried at least one CAM before their first rheumatology consultation. Results from a nationwide survey in Canada demonstrated that 22% adults with arthritis over 20 years of age had used CAM[23]. In this group chiropractic services were used most commonly (59.5%) followed by massage (48.5%), acupuncture (25%) and homeopathy (21%).

CAM is also used widely by rheumatology patients in the Middle East. Patients attending rheumatology clinics in Israel tended to use CAM more often compared to patients seen in primary care, internal medicine and other specialties[24]; this study indicated that in Israel, CAM was used more frequently by patients with fibromyalgia (58%), in contrast to studies from other countries, where the most common rheumatological diagnoses associated with CAM use were RA and OA[25-28]. In work from Eastern Europe, a study from Turkey reported that 76% (n = 250) patients with any form of arthritis used at least one CAM[25]. Most of them used thermal therapy, similar to a comparable study from the United States[29].

Finally, CAM use is also common in Australasia; in one Australian study 82% of RA patients, used more than one CAM after diagnosis and more than half of respondents were current users[30]. The report suggested the most common CAMs used in Australia were dietary manipulation and use of copper bracelets. In contrast, studies in Asian countries suggest other therapies are commonly used. For example in India, Ayurveda and massage therapy were used most commonly (around 80%) in one survey[28]. This may be because the Government of India strongly supports alternative therapies such as Ayurveda, Homeopathy, Siddha and Unani medicine and CAM practices and modern (allopathic) medicine in India run in parallel[31]. Similar observations have been made in Korea, where traditional oriental medical treatment is performed by certified Korea medical doctors and there is a wide acceptance of acupuncture as a basic treatment[32]. By contrast, Japan has a lower prevalence of CAM use (approximately 35%). In Japan, dietary supplements, particularly ginger extracts were the most popular type of CAM[33].

USERS OF CAM, PATIENTS' REASONS AND OBJECTIVES FOR USING CAM

There is a documented variation in the use of CAM among different socio-demographic groups. Women are more likely to use CAM than men[21,23,24,27,29]. There are also differences according to age: middle aged people are most likely to use complementary therapies, while the youngest and oldest age groups are less likely to have done so[23,25,27,29,34]. Ethnic background appears relevant in CAM usage among adults with arthritis; Caucasian individuals are more likely to use CAM than Blacks, Asians and Hispanics[21,34,35]. In recent studies, the use of CAM was explored according to three socio-economic indicators. Researchers reported that the use of CAM increases significantly with income, and higher education in most western countries[23,24,34]. This may be because medical insurance does not cover CAM, and hence low-income population groups may not be able to afford it[24].

The aims of trying CAM in rheumatology patients is most commonly reported to be to reduce and control pain and stiffness[20,27,36]. Similarly a wide range of reasons have been suggested for discontinuation of CAM therapy, with the lack of effectiveness and high cost of therapy being most common[21]. A common source of information about CAM is by "word of mouth", *e.g.*, previous experiences from families, relatives, neighbours and friends[24,25,27].

DISCLOSURE OF CAM USE TO RHEUMATOLOGISTS

The reported rate of patients disclosing CAM use to rheumatologists ranges from 28% to over 70%[20,28,32,36-40]. Women are more likely to talk about CAM therapy than men[37,38]. In one study, rheumatology patients diagnosed with fibromyalgia were more likely to discuss use of CAM with their physician[20]. When asked directly, many patients suggest that they would welcome and greater involvement of their clinician in providing details of alternative practitioners when requested[39].

REASONS FOR NOT DISCLOSING USAGE OF CAM TO RHEUMATOLOGISTS

There are various reasons documented for patients not disclosing their CAM use to clinicians (Table 2). Some patients are concerned about a possible negative

response from rheumatologists. This includes the fear that rheumatologists would not continue to provide health care to them or that the rheumatologist would disapprove of them using CAM. Patients may also want to avoid any conflict or embarrassment during their consultation, and may feel that non-disclosure would ensure this[39,40]. Most rheumatologists do not ask specifically about CAM usage and this may give an impression that the disclosure of the use of CAM is not important in their health care treatment[20,40]. Sleath *et al*[38] suggested that rheumatology patients were more likely to disclose CAM if the rheumatologists involved them in the decision-making process about their treatment and treatment goals.

ATTITUDES OF RHECAMUMATOLOGISTS TOWARDS CAM

A recent study suggested that physicians in the United Kingdom have a positive attitude towards some CAM modalities[41]. Among a background prevalence of use of CAM ranging from 12.1% to 32%, 39% to 46% of physicians recommended using CAM.

Similarly, a national survey of rheumatologist in the United States showed that more than half of the respondents considered some CAM therapies to be beneficial and were at least moderately likely to recommend them to the patients[42]. Female rheumatologists were significantly more likely than men to perceive common CAM therapies as beneficial. Rheumatologists born outside the United Staes had more favourable attitudes towards CAM overall. Out of 345 rheumatologists, 65% were "very" or "somewhat likely" to recommend body work, followed closely by meditation (64%). Only 10% of them would consider recommending an energy medicine modality, such as Reiki. This could reflect limited availability and experience of this therapy. Massage had the highest perceived benefits, followed by meditation. Acupuncture and spinal manipulation was thought to be either "very" or "moderately" beneficial, whilst 60% of the rheumatologists had indicated that glucosamine and/or chondroitin was not very or at all beneficial.

Another study looked at the referral patterns for 22 CAM therapies[43]. It showed that half of physicians had referred patients for 8 of the therapies (*i.e.,* acupuncture, behavioural medicine, biofeedback, counselling/psychotherapy, dietary prescriptions, electromagnetic applications such as transcutaneous and percutaneous electrical nerve stimulation, exercise and massage). Counselling/psychotherapy and exercise headed the list of modalities which had been used by more than half of the rheumatologists. However other modalities including meditation, prayer and spiritual direction non-chiropractic, hypnotherapy, herbal medicine, music therapy, magnets, energetic healing and homeopathy were never used by 75% of physicians.

These findings were subsequently supported by a systematic review, which concluded that rheumatologists in North America showed moderate acceptance towards some types of CAM, particularly body work and meditation practices[44]. An overwhelming majority of them had recommended these therapies in the past and were willing to continue this practice. That review also indicated that energy medicine had the lowest perceived benefit and received least recommendations and referrals from rheumatologists. A large proportion of rheumatologists had reported no or minor clinical use of CAM therapies such as prayer, spiritual direction and herbal medicine. They believed that the efficacy of these modalities is poor and potentially even harmful.

CONCLUSION

CAM usage is substantially increasing worldwide. Despite high rates of use of CAM therapies the number of patients disclosing it to their rheumatologists is low. There is a need to promote disclosure, particularly with respect to over the counter preparations that may interact with physician prescribed medication.

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