

## Alternative medicine in rheumatology: Threat or challenge?

J.W.G. Jacobs<sup>1</sup>, J.J. Rasker<sup>2</sup>,  
J.W.J. Bijlsma<sup>1</sup>

<sup>1</sup>Department of Rheumatology and Clinical Immunology, University Medical Center, Utrecht; <sup>2</sup>Hospital 'Medisch Spectrum Twente', Enschede, The Netherlands.

Johannes W.G. Jacobs, MD, Associate Professor of Rheumatology; Johannes W.J. Bijlsma, MD, Professor of Rheumatology; Johannes J Rasker, MD, Professor of Rheumatology.

Please address correspondence and reprints requests to: Johannes W.G. Jacobs, MD, Associate Professor of Rheumatology, Department of Rheumatology & Clinical Immunology, University Medical Center, PO Box 85500, 3508 GA Utrecht, The Netherlands.

E-mail: j.w.g.jacobs@azu.nl.

Received on January 22, 2001; accepted on February 7, 2001.

© Copyright CLINICAL AND EXPERIMENTAL RHEUMATOLOGY 2001.

**Key words:** Herbs, alternative, complementary, non-conventional, non-mainstream, therapy, medicine, method, clinical trial, rheumatology, rheumatoid arthritis, health status, Dutch, The Netherlands, patient education, European Board of Rheumatology, core curriculum, world wide web.

In the current issue of the journal the persistence of ancient medical practices in Mexico is described (1). This article raises an important issue: the large and poorly controlled use of unproven or complementary and alternative medicine (CAM) in the field of rheumatic diseases. We all know that among patients suffering from chronic illnesses, in addition to or instead of conventional, mainstream medicine, CAM are often applied. The use of CAM even seems to be growing, despite the trend to use only evidence-based and cost-effective conventional medicine (2). Public interest in non-traditional treatments led the NIH in the USA to open the Office of Alternative Medicine (OAM) in 1992, which was replaced by the National Centre for Complementary and Alternative Medicine (NCCAM) in 1998. The NCCAM encourages and financially supports research on CAM. In the Netherlands, there is no such national centre.

Although we know that CAM are being applied frequently, exact numbers on the extent of usage cannot be given. An important reason is the problem of defining CAM. On the one hand, CAM might not only comprise therapies but also methods of diagnosis and prevention as well as philosophical world views, beliefs and attitudes. On the other hand, a clear definition of 'alternative' is not easy to establish either. The criterion of being 'non-mainstream' is not satisfactory: what is non-mainstream in Europe could be mainstream in another part of the world, e.g. acupuncture. The same holds true for the criterion of not being taught widely in medical schools or not being generally available as a treatment modality in hospitals (3). Nor does the criterion of not having proven efficacy apply, as this criterion also applies to some of the established conventional treatments. The definition of the 'Cochrane Field in Complementary Medicine' of CAM (being '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 frameworks of medicine') isn't very helpful in this

respect either. (4).

In general, CAM is characterised by methods that haven't been proven to be efficient, and are based on theories that are not congruent with scientific principles and are not taught in universities. (5). This generalisation cannot easily be used for classification, however. Is, for example a patient applying CAM when she does not eat pork or drinks no coffee because she thinks this will aggravate her arthritis? Or someone who wears a copper bracelet to prevent arthritis? For this reason the only practical solution is to describe in epidemiological or other studies on CAM exactly which forms of therapies have been included. The problem then of course remains that the results of different studies often cannot be directly compared. In the Netherlands about 55% of patients with chronic rheumatic diseases go to an alternative healer and use CAM at least once during the course of their disease, while in the general adult population this percentage is around 20 (6,7). These percentages do not differ very much from those in other countries, e.g. the U.S.A., Italy or Mexico (1,7,8). In addition, the use of alternative over-the-counter products is widespread (9). The types of CAM applied of course differ from region to region. In Mexico more patients will use herbal remedies, while in southern Europe more patients seek relief at spa centres or places of pilgrimage.

How did this situation of the growing use of and interest in CAM evolve? In analysing this, there is the problem that the factors determining whether a patient will use CAM or not have not been fully elucidated. Some hypotheses exist. First, dissatisfaction with conventional medicine because of ineffectiveness or adverse effects could play an important role. Secondly, dissatisfaction with the attitude of regular medical doctors. Third, the need for personal control over the disease (active coping) could be a determinant to use CAM and fourth, the philosophical congruence of theories of CAM with the patients' values, world views and beliefs regarding the disease and therapies (cognitions). In a Dutch study of RA patients performed some years ago, rheumatolo-

gists received higher scores for attitude as well as for the effect of treatment than alternative health care providers (10). This contradicts the hypothesis of dissatisfaction as a main determinant for the use of CAM. In the USA, likewise, a study among patients with various diseases showed that the motivation to use CAM is not dissatisfaction with conventional medicine (11). In a random sample of 262 Dutch RA patients, those who used CAM were younger than those who did not, but there were no differences regarding the duration of RA, physical, psychological or social functioning or pain coping. Users of CAM nevertheless perceived a higher impact of RA in several domains of life, especially psychosocial functioning, compared to non-users (12). This finding, that in contrast to functional capacity the perceived impact of RA was different in the two groups, could imply that the perceived impact of a disease is a determinant to use CAM. In the USA study as well, users of CAM reported poorer health status compared to non-users (11). These findings suggest that CAM is not a substitute for unsatisfactory conventional treatment prescribed by the rheumatologist, but that CAM is more congruent than conventional treatment with certain patients' values, world views and beliefs regarding the disease and therapies. Therefore, one method to decrease the use of undesired CAM would seem to be psychosocial intervention and patient education. The latter especially is needed since increased use of the World Wide Web allows patients ready access to information of various levels of scientific reliability on the subject of CAM as well as more conventional treatments.

What is and has been the role of clinical trials investigating the effects of CAM? Despite the rising number of controlled studies, the majority of studies regarding CAM leave much to be desired in terms of methodological design, resulting in false positive claims (13, 14). Of course, the procedures for evaluating medicines that are regarded as products of scientific Western medicine are not always perfect either (5). It has been argued that the evaluation of

studies on CAM is different and more difficult compared to studies on regular medicine. However, in our view the evaluation of the effects of CAM should in general be quite the same as for mainstream therapy. Even supposedly beneficial 'holistic' aspects can be assessed by quality of life measurements. An important parameter for any clinical trial is face validity (common sense).

A valid explanation of the poor quality of CAM studies is that relatively few resources are available for this kind of research. We do not retain that it is necessary to investigate every single CAM. However, if there is circumstantial evidence that a certain frequently used (and expensive) form of CAM may be beneficial, governments have good reason to promote the investigation of this CAM (5). Practical collaboration between CAM practitioners and conventional clinical researchers could improve the quality of such studies. This collaboration would also reduce defensive attitudes in the face of mutually perceived hostility and help foster a critical attitude and research skills in complementary medical practitioners (13). The effect of a methodologically sound clinical trial on the frequency of usage of the investigated CAM, however, is limited. If such a study proves that a certain therapy is effective, it can become recognised as a regular therapy, as for example in the cases of capsaicin, hyaluran and fish oil (15-18). However, this does not automatically result in the reimbursement of such therapies by health insurance companies. If, on the other hand, in a careful study a certain CAM does not appear to have the promised beneficial effect, it may be removed from the market, as occurred in the case of enzyme therapy in the Netherlands after the publication of our study (19), or it will be disapproved of as in the case of zinc and Greenlip mussels (20, 21). The effect of studies on the frequency of usage of CAM that are not reimbursed by health care systems seems to be limited. The general lack of belief in the effect of a remedy does not constitute an obstruction to its use, as reflected in the popularity of copper bracelets among

rheumatic patients in Mexico (1). Indeed, most patients do not expect healing of their disease, only the relief of pain, and this is often achieved through a placebo response (22).

One could argue that the lack of proven efficacy and an unknown mode of action (if any) are not reasons *per se* to disapprove of the use of a CAM, as long as there are no high costs, interactions or adverse effects involved and as long as the CAM does not induce physical or psychological dependence or the withdrawal of therapies with proven effect. A CAM, even if it does not produce the effects it is used for, could improve the quality of life. On the other hand, certain CAM, especially herbs, may have serious side effects (1). Examples are the harmful interactions between St. John's wort and drugs like indinavira and cyclosporin (23,24). In this respect, some CAM do not differ very much from conventional drugs.

#### **What are the lessons to be learned from this?**

First, dissatisfaction with conventional medicine doesn't seem to play a major role in the decision to use CAM. We must continue to try to deliver to our patients the highest quality of therapy and care against the undertow of increasing financial limitations, but we cannot expect that this will seriously reduce the use of CAM.

Secondly, if the main determinants of CAM are the patient's values, world views and beliefs regarding disease and therapies, it probably will not be sufficient to refer to scientific principles and discuss CAM in the light of evidence-based medicine to dissuade the patient from using them. We must take into account the patient's cognitions and frames of reference in the discussion of CAM. Open communication between the patient and doctor will result in better insight into the ideas of the patient and will also improve compliance with regular therapy (25). A real or perceived negative attitude of the rheumatologist towards CAM will simply cause a patient to stop informing him or her about their use of such remedies. This is undesirable because it is important to educate patients and warn them

against possible side effects.

A pragmatic attitude for the rheumatologist to take in a discussion with a patient is to report whether the CAM has been investigated, whether efficacy has been shown and what the possible side effects are. In cases where the method has not been investigated, the rheumatologist could try to provide a rough estimate as to whether efficacy may at least be probable or not, and whether side effects are probable. Especially in cases where an effect has not been proven or has been proven to be absent, it is in our view wise to advise the patient to address the following questions (which with little modification also apply to conventional medicine) before making a decision:

What are the regular medical treatments available as an alternative to the CAM ?

What effects of the CAM can be expected – on pain, on other symptoms, and on the course of the disease ?

How safe is it? Which are the possible side effects and interactions with conventional drugs?

Are there individual patient's characteristics that could influence the possible positive or negative effects of the CAM ?

How long does the CAM have to be applied before any effect is evident?

How expensive is it and will it be reimbursed?

Of course, the normal out-patient visit is limited in time and a major change in the patient's beliefs cannot be established in 10 to 15 minutes. Education should therefore not be limited to out-patient visits. Documentation about CAM couched in simple terms and in the native language should be available to patients (26). Consensus on CAM in the medical society is a requirement to avoid contradictory advice from different doctors (27). Increased use of the World Wide Web offers a modern educational tool for rheumatological societies: scientifically reliable information on the subject of CAM can be provided

for patients and rheumatologists on the internet sites of medical societies, arthritis foundations and health care providing systems (28). Rheumatologists will need to have knowledge regarding the (side) effects of CAM in rheumatic disorders in order to be able to give well-founded advice to patients. Knowledge of non-conventional medicine in rheumatic diseases is a criterion of the European Board of Rheumatology core curriculum criteria. This means that CAM must become part of the medical curriculum of the rheumatologist.

### References

1. ACEVES-AVILA FJ, MEDINA F, FRAGA A: Herbal therapies in rheumatology: The persistence of ancient medical practices. *Clin Exp Rheumatol* 2001; 19: 177-183.
2. PANUSH RS: American College of Rheumatology position statement. Complementary and alternative therapies for rheumatic disease. In: PANUSH RS (Ed.): Complementary and Alternative Therapies for Rheumatic Diseases II. *Rheum Dis Clin North Am* 2000; 26: 189-92.
3. EISENBERG DM, KESSLER RC, FOSTER C, NORLOCK FE, CALKINS DR, DELBANCO TL: Unconventional medicine in the United States, prevalence, costs and patterns of use. *N Engl J Med* 1993; 328: 246-52.
4. ERNST E: Usage of complementary therapies in rheumatology: A systematic review. *Clin Rheumatol* 1998; 17: 301-5.
5. ANONYMOUS: Complementary medicine: Time for critical engagement. *Lancet* 2000; 356: 2023 (Editorial).
6. CORNELISSEN PGJ, RASKER JJ, VALKENBURG HA: The arthritis sufferer and the community: A comparison of arthritis sufferers in rural and urban areas. *Ann Rheum Dis* 1988; 47: 150-6.
7. JACOBS JW, RASKER JJ, RIEL PLCM VAN, GRIBNAU FWJ, PUTTE LBA VAN DE: Alternatieve behandelingswijzen bij reumatische aandoeningen; een literatuuronderzoek (Alternative treatments in patients with rheumatic diseases; a review of the literature). *Ned Tijdschr Geneesk* 1991; 135: 317-22.
8. VECCHIO PC: Attitudes to alternative medicine by rheumatology outpatient attenders. *J Rheumatol* 1994; 21: 145-7.
9. BOISSET M, FITZCHARLES MA: Alternative medicine use by rheumatology patients in a universal health care setting. *J Rheumatol* 1994; 21: 148-52.
10. VISSER GJ, PETERS L, RASKER JJ: Rheumatologists and their patients who seek alternative care: An agreement to disagree. *Br J Rheumatol* 1992; 31: 485-90.
11. ASTIN JA: Why patients use alternative medicine. *JAMA* 1998; 279: 1548-53.
12. JACOBS JW, KRAAIMAAT FW, BIJLSMA JW: Why do patients with rheumatoid arthritis use alternative treatments? *Clin Rheumatol* 2001; (in press).
13. HASELEN RA VAN: Research on complementary medicine in rheumatic diseases: The need for better quality studies and reproduction of claimed positive results. *Rheumatol* 1999; 38: 387-90 (Editorial).
14. ERNST E: Complementary and alternative medicine in rheumatology. *Baillière's Clin Rheumatol* 2000; 14: 731-49.
15. DEAL CL, SCHNITZER TJ, LIPSTEIN E et al.: Treatment of arthritis with topical capsaicin: a double blind trial. *Clin Therapeut* 1991; 13: 383-95.
16. MCCARTHY GM, MCCARTHY DJ: Effect of topical capsaicin in the therapy of painful osteoarthritis of the hands. *J Rheumatol* 1992; 19: 604-6.
17. BRANDT K, SMITH GN, SIMON LS: Intra-articular injection of hyaluronan as treatment for knee osteoarthritis. *Arthritis Rheum* 2000; 43: 1192-203.
18. ARIZA-ARIZA R, MESTANZA-PERALTA M, CARDIEL MH: Omega-3 fatty acids in rheumatoid arthritis: an overview. *Semin Arthritis Rheum* 1998; 27: 366-70.
19. JACOBS JW, RASKER JJ, RIEL PLCM VAN, GRIBNAU FWJ, PUTTE LBA VAN DE: Rheumajecta and Vasolastine in the treatment of rheumatoid arthritis - The results of a placebo controlled double blind trial of a complementary treatment. *Scand J Rheumatol* 1991; 20: 4434-40.
20. RASKER JJ, KARDAUN SH: Lack of beneficial effect of zinc sulphate in rheumatoid arthritis. *Scand J Rheumatol* 1981; 11: 168-70.
21. HUSKISSON EC, SCOTT J, BRYANS R: Seaton is ineffective in rheumatoid arthritis. *Br Med J* 1981; 282: 1358-9.
22. SPIRO HM: Hope helps: Placebos in alternative medicine in rheumatology. *Rheum Dis Clin North Am* 1999; 25: 855-60.
23. ERNST E, CHRUBASIK S: Phyto-anti-inflammatory drugs for rheumatic conditions - A systematic review of randomised placebo-controlled, double-blind trials. *Rheum Dis Clin North Am* 2000; 26: 13-27.
24. ERNST E: Second thoughts about the safety of St John's wort. *Lancet* 1999; 354: 2014-6.
25. Harwood A: The hot-cold theory of disease: Implications for treatment of Puerto Rican patients. *JAMA* 1971; 216: 1153-8.
26. RASKER JJ: *Reuma & Alternatieve Behandelingsmethoden (Rheumatic Diseases and Alternative Treatments)*. Houten, Arko, 1993.
27. HORSTMAN J: *Arthritis Foundation's Guide to Alternative Therapies*. Arthritis Foundation 1999.
28. Complementary Medicine Library: [http://www.coloradohealthnet.org/holistic/complementary\\_lib.html](http://www.coloradohealthnet.org/holistic/complementary_lib.html).