

prevent sensitization.

H HeJ mice. You are
receptor 4 so it is non-
model.

ewhat serendipitous
use cholera toxin as
e took that as a pos-
mice with the same
use, so it is not totally
the toxin, but I think
that should have an

in the human, either

h any answers.

Arbeiten aus dem Paul-Ehrlich-Institut, Band 94
10th International Paul-Ehrlich-Seminar, Lübeck 2002
Druck- und Verlagshaus Sperlich

Alternative Approaches to Immunotherapy of Allergy

Irwin Ziment

Abstract

Alternative therapies for allergic diseases may be prescribed by physicians or provided by other practitioners or selected by patients without resorting to consultation with a health advisor. The most popular alternative therapies include dietary manipulation and exaggerated avoidance of allergens. Established medical therapies include herbs (Western and Asian), homeopathy and acupuncture; many publications suggest they are of value in allergic disease management. However, most studies lack sufficient power, do not have adequate controls, fail to duplicate standard clinical practices, or utilize a heterogeneous group of subjects. Careful analysis suggest that popular alternative therapies might offer a minimal benefit over placebos, but further studies are required for more rigorous evaluation of outcomes. Numerous esoteric or non-specific methods of treating allergic diseases are also available which may be promoted by enthusiastic practitioners or supported by satisfied patients. The majority of such therapies will never be scientifically evaluated, and the results of such modalities will be difficult to separate out from those of true placebo treatments. It is evident that while the "prose" of scientifically established therapies is appealing to a declining number of patients, the "poetry" of complementary therapies resonates with an increasing majority of the public who believe in the magic of alternative medicine.

Introduction

Patients with treatable diseases are frequently dissatisfied with routine medical therapies. Despite the increasing effectiveness of drugs and orthodox medical procedures, many thoughtful people reject these advances since they may be inconvenient, expensive or carry the risk of harm. Moreover, at a time when science has demonstrated brilliant successes, alternative beliefs persist and proliferate. Thus, astrology, fortune telling, religious faith, belief in magic and a deep trust in the healing powers of nature compete with the rational teachings of science and medicine.

Patients with allergies – both real and imaginary – seek out healers who offer a surprising range of alternative therapies. Many of these healers reject standard drugs such as bronchodilators, antihistamines and corticosteroids. However, it is not uncommon for alternative practitioners to extend, in an imaginative fashion, the orthodox practices of immunotherapy and desensitization. Alternative therapies for allergy are often based on unproven concepts of somatic reactions to a large variety of unfavorable stimuli, such as moulds, chemicals, foods and infectious agents. Imaginative methods are utilized to “prove” the existence of such causative etiologies in subjects with a large variety of allergic and pseudo-allergic diseases. Many of the treatments are based on historic practices and are of dubious value, while others are pseudo-scientific or deliberately fraudulent. The range of alternative diagnostic and therapeutic approaches to asthma and allergies is enormous, and reflects the huge interest that patients have in non-orthodox treatments.

Alternative Approaches

As shown in Table 1, the common alternative approaches may be of general use for a variety of diseases or of specific use for allergens and asthma. As the world population becomes increasingly migratory, the extension of regional therapies is becoming world wide, and every country is liable to experience the flourishing of practitioners of varying backgrounds and training who incorporate a wide variety of alternative practices. The most commonly used alternative group of therapies is currently made up of botanical remedies, including herbal phytomedicines, vitamins, and nutraceuticals; animal products and minerals are also incorporated in such products. Remedies may be “macrotherapies” consisting of mixtures of herbs and other products, or “microtherapies” made up of diluted allergens or homeopathic preparations. Physical techniques vary from massage therapies to acupuncture, and include injections, electric stimulation, and energy balancing. These techniques can also be adapted for the diagnosis or measurement of abnormal body function as a prelude to devising a suitable treatment. Psychological therapies include newer techniques such as having patients talk about or write about their illness, although older practices – including hypnosis, biofeedback, complex behavior altering techniques, elimination of allergens – remain very popular. Faith healing, prayer, the environment of a spa, shrine or cave, and numerous other psychic or thought-altering processes present an extraordinary catalogue of healing options.

Thus, there are hundreds of different forms of alternative approaches, and many of the available treatments will be individually modified by specific practitioners. The majority of patients who seek alternative forms of therapy invest interest, time, travel, confidence and money in their treatments, and they undoubtedly feel that their investment is of some value in helping attain relief of symptoms. The nature of many alternative therapies is individualistic, and if it fails to help the patient, it is always possible for the practitioner to explain the failure on some uncontrollable negative factors, such as non-compliance, an inadequate course of therapy, or a mysterious complication: in such cases, further therapy with appropriate modifications may be expected to induce a more favorable response. Since patients are willing to accept that alternative therapies lack scientific validation, they are often willing to accept that the healer has spe-

Table 1. *Classes of Alternative Therapies*

S	Macropharmacology
	• Traditional Chinese medicine • Traditional Japanese medicine • Indian (e.g. Ayurveda) • Indonesian • Western herbs • Bach Flowers • Unusual drugs (e.g. methotrexate) • Extracts from plants
S	Micropharmacology
	• Unusual desensitization (e.g. urine, saliva) • Homeopathy (classical, self-administered) • Manipulative • Osteopathy • Chiropractic • Chiropractic variations • Body-work (exercise, adjustment of energy) • Acupuncture/Acupuncture variations • Breathing exercises (e.g. Buteyko method)
S	Environmental
	• Special atmospheres (spas, retreats) • Climatotherapy (e.g. use of climate) • Naturopathy (use of supplements, exercise)

Table 1. *Classes of Alternative Therapy.*

SYSTEM	COMMENTS
Macropharmacologic	
• Traditional Chinese Medicine (TCM)	Numerous herbs (e.g. Ephedra; often animal or mineral components)
• Traditional Japanese Medicine (Kampo)	Similar to TCM. Many products are anti-inflammatory
• Indian (e.g. Ayurveda)	Many single herbal remedies; most appear to be mucokinetics
• Indonesien	Similar to TCM; often used as tonics
• Western herbs	Most potent herbs are obsolescent
• Bach Flowers	Newer herbs include butterbur
• Unusual drugs (e.g. clonidine, marijuana, methotrexate)	These are of limited value and of dubious clinical benefit
• Extracts from plants	Quercetin, kaempferol, antioxidants, etc.
Micropharmacologic	
• Unusual desensitization agents (e.g. urine, saliva)	Pseudo-scientific; unproven value; possibly harmful
• Homeopathy (classical, modified or self-administered)	Value suggested by some studies, but benefit not established
• Manipulative	No evidence of specific benefit
• Osteopathy	No evidence of specific benefit
• Chiropractic	Sham procedure as effective
• Chiropractic variations	Numerous variations, often bizarre (e.g. "NAET")
• Body-work (exercises, massage, adjustment of energy fields)	Unproven; bizarre variations introduced by individual practitioners
• Acupuncture/Acupressure	Variable literature suggests some limited benefits are possible
• Breathing exercises (e.g., QiGong, Buteyko method, Yoga)	Subjective value, but limited evidence of benefit
Environmental	
• Special atmospheres (e.g. caves, mines, spas, retreats)	Subjective value, but limited evidence of benefit
• Climatotherapy or antigen-free atmosphere (e.g. use of special filters)	Many provide temporary benefit; filtered air may help, but exaggerated claims are made
• Naturopathy (using diet, water, supplements, exercise)	Subjective value; may have benefit if practiced consistently

Table 1. *Classes of Alternative Therapy (continued).*

SYSTEM	COMMENTS
Psychic	
• Prayer, faith healing	Subjective benefit usually occurs
• Hypnosis, biofeedback	Limited evidence of benefit
• Positive imagery	Limited evidence of benefit
• Writing about illness	Limited evidence of benefit
• Psychoanalysis and similar techniques	May relieve underlying problems and improve control of illness
Bizarre	
• Kinesiotherapy (e.g. "NAET")	Pseudo-scientific diagnosis of allergies; unproven rationale
• Electromagnetic therapies	Liable to be fraudulent
• Organ vagotonia	Medical cultism
• Neutralization techniques	Dubious science, unproven value
• Detoxification (e.g. enemas)	Unproven value; remains popular

cial powers, and that it is reasonable for them to submit to extended therapy if they have a good relationship with the provider. Similarly, many patients use a series of self-selected treatments, such as herbs, until they discover an appropriate treatment for their individual problem, or they move on to find and experience a more esoteric curative modality.

Herbal Therapy

Some of the earliest, persisting uses of herbs are Chinese remedies for asthma and allergic symptoms (Table 2). Ma huang is the traditionally favored plant-medicine that was found to contain ephedrine and pseudo-ephedrine; although these drugs are of declining popularity, Ma huang is still vigorously promoted. It is often used in traditional Chinese medicine (TCM) in combination with many other herbs, and with animal products such as lizard, snake, and crocodile components. Similar combinations (which may include 14 or more herbs) are used in Kampo, the traditional Japanese medical system. Some Kampo products, such as Saibuko-to and Shoseiroyu-to, have been shown to have leukotriene inhibitory effects, but the clinical effects have not been shown to be superior to orthodox Western drugs. Moreover, some herbs from Asia have been reported to cause toxic effects such as hypersensitivity pneumonitis, or they may be adulterated and can result in severe complications. Thus, although the anti-inflammatory or anti-allergic properties of some Chinese herbs may be useful, their value is limited and the possible danger of toxicity should always be a major concern. A number of Indian herbs, such as *Tylophora asthmatica*, *Adhatoda vasaka* and *Coleus forskohlii* are of similar benefit, but they have not established themselves as significant

alternative therapy in asthma cigarette bronchodilator drugs which tiotropium that v disease.

Table 2. *Some TCM**

COMPONENTS:

HERBS

MINERAL

ANIMALS

PROPRIETARY

CHINESE

JAPANESE

* Traditional Chinese

An interesting effective as cetirizine the issue as to whether in these subjects. effects. A number of components – such to have benefits, b

In conclusion. tions as well as in benefits, but insu Nevertheless, the offering unique be tial and the value traditional healing

alternative therapies in the West. In contrast, the Indian herb d'hatura, which was used in asthma cigarettes, proved to be related to *Datura stramonium*, the source of anticholinergic drugs which have culminated in the introduction of the major bronchodilator tiotropium that was recently introduced for use in chronic obstructive pulmonary disease.

Table 2. Some TCM* and Kampo Remedies

COMPONENTS:

HERBS	Bupleurum, cordyceps, ginkgo, licorice, ma huang (<i>Ephedra sinica</i>), magnolia, peony, pinellia, <i>Piper futokadsura</i> , platycodon, polygonum, rehmania, scute
MINERAL	Gypsum, mercury salts, pearls
ANIMALS	Gecko, crocodile bile, snake skin, chicken

PROPRIETARY PRODUCTS:

CHINESE	• Crocodile Bile Pill for Asthma • GeJie Anti-asthma Pill • Minor Blue Dragon Preparation • Turtle Shell • Cistanche Combination • Jade Screen Powder • Kam-lin • Wen Yang
JAPANESE	• Saibuko-to • Shosaiko-ti • Shoseiryu-to • Syojaiko-to

* Traditional Chinese Medicine

An interesting herb is butterbur, *Petasites hybridus*, which has been shown to be as effective as cetirizine in the treatment of seasonal allergic rhinitis. However, this raises the issue as to whether either agent would be significantly more effective than placebo in these subjects, although butterbur does have the advantage of causing less side effects. A number of other herbs have been recommended for allergies, and specific components – such as the flavonoids, quercetin, and kaempferol – have been reported to have benefits, but evidence of their clinical effectiveness is inadequate.

In conclusion, it appears that many traditional herbs, and some specific combinations as well as individual chemical extracts, may offer anti-asthma and anti-allergy benefits, but insufficient evidence exists to support their use in clinical practice. Nevertheless, there are suggestive studies that indicate the possibility of herbal agents offering unique benefits in peanut allergy and other allergic disorders. Thus, the potential and the value of a selected few plant chemicals, mushroom components and other traditional healing agents merits further scientific, controlled clinical investigation.

Homeopathy

In contrast to the macrotherapeutic pharmacotherapy offered by TCM and other herbal therapies, homeopathy utilizes microtherapeutic doses of extracts from plants, animals, allergens, toxic drugs, and derivatives of diseased tissues to treat a huge variety of disorders. The most important component of traditional homeopathy is the careful selection of a diluted preparation to treat a specific individual on the basis of a probing analysis of the patient's symptoms and personality. Such a deep individual approach can be equated with a "pharmacotherapeutic psychoanalysis" of the patient, based on a deep healing bond that is established by the homeopath with the patient. In contrast, it is difficult to explain how this classical approach can be effective when "diluted" to the point where a patient self-diagnoses and then purchases a self-selected over-the-counter proprietary preparation. There appears to be a resurgence in the number of individuals who are satisfied with homeopathic treatment, which is based on a deep faith in the concept that an agent that causes symptoms can relieve these symptoms when administered in an extraordinary dilution.

Homeopathic preparations are supposed to transfer the healing essence, or spirit, of the specifically chosen agent through multiple dilutions, so that the essence is strengthened while the agent is diluted to non-existence. This concept is completely unacceptable to most scientifically trained physicians, but is more readily accepted by philosophical allergists. It is of interest that metallurgists may also accept the effectiveness of homeopathy, since it is known that one atom of a foreign metal can dramatically alter the properties of a specimen of an otherwise pure metal. The ability of minute (or non-existent) amounts of an active agent to have profound physical properties evokes mystical appreciation of the unknown governing forces and the natural healing powers of the body. However, medical scientific experience suggests that the dramatic catalysis of a healing mechanism by a traditional homeopathic remedy acts purely at a psychic level in an accepting patient, rather than by evoking a pathophysiologic response in the diseased organ or tissue.

Despite vigorous arguments as to the effectiveness of homeopathy, there are important publications that demonstrate an apparent benefit in allergic rhinitis and asthma. The best studies come from one group in Glasgow, Scotland, but this raises the concern that the same clinical studies have not been investigated or replicated by other research groups. Moreover, one recent independent study by respected scientific physicians demonstrated that although a homeopathic allergen preparation appeared to have some value, it was no more effective than placebo.

In conclusion, there is some clinical evidence in favor of homeopathic doses of allergen given orally for asthma and allergic rhinitis. However, one should ask why use a homeopathic preparation rather than just an inert placebo, since the healing process may depend mainly on the faith of the patient and the token remedial effect of the medication? This theme applies to much of alternative medicine, since patients select a specific remedy that appeals to them, and the response is likely to be a non-specific reversion to the mean as the illness gradually (or, in some cases, dramatically) improves coincidentally following the treatment.

Psychic Healing

The greatest cor is seen in a variety ling to shamanism and cave therapy include massage or tion. More spiritual methods that requ exercises. It is poss counter-irritation. toms. Some techn perhaps other neu thetic interactions of the body, thereb

Many religions control to tribal ceremon "psychos healed by ortho fatigue, generaliz ning libido, weigh other allergic dis even claim they wa

Acupuncture

The extraord be justified by its disorders such as n improve almost an AIDS and cancer. zed, and they sho value. The proble of treatment, since is not cost-effectiv potential role in r "cure" from a cou any of a huge vari there is no sound t other than by mea severe symptoms u

Psychic Healing

The greatest contrast to the macrotherapeutic treatment offered by herbal mixtures is seen in a variety of non-medical treatments. These range from prayer and faith healing to shamanism and exorcism, and from hypnosis and biofeedback to spa therapy and cave therapy (speleotherapy). Other similarly non-pharmacologic approaches include massage or body work, such as chiropractic, osteopathy, and energy manipulation. More spiritual healing can be derived from positive psychic stimulation using methods that require crystals, pyramids, chanting, music, yoga, meditation or Chinese exercises. It is possible that such therapies work by psychic distraction, or by somatic counter-irritation, to obliterate awareness or to decrease subjective concerns of symptoms. Some techniques appear to stimulate the release of endogenous endorphins - and perhaps other neurotransmitters - or to change the balance of sympathetic-parasympathetic interactions to bring about a decrease in the psychoneuroimmunologic responses of the body, thereby resulting in alleviation of symptoms.

Many religions and cults utilize psychic healing techniques, varying from mind control to tribal ceremonies. These appear to work most remarkably to help "neurovegetative" or "psychosomatic" disorders. They can benefit conditions that are not readily healed by orthodox medical practices or by prescribed medications, such as chronic fatigue, generalized pain, arthralgias, myalgias, loss of confidence or ambition, declining libido, weight problems, etc. Undoubtedly, there are patients with asthma and other allergic disorders who also benefit from such psychic treatments, and who may even claim they were cured by a charismatic healer.

Acupuncture

The extraordinary popularity of acupuncture as an alternative treatment appears to be justified by its proven effectiveness in some pain syndromes and for a few other disorders such as nausea. However, many patients feel that acupuncture can relieve or improve almost any health problem, ranging from fibromyalgia to fatigue, and even AIDS and cancer. A number of quality studies in asthma and allergy have been analyzed, and they show a trend to benefit, but they lack evidence of being of significant value. The problem with acupuncture is that it requires a therapist to deliver a course of treatment, since self-therapy seems to be far less effective. In practice, acupuncture is not cost-effective or reliable in the treatment of severe or acute asthma, and its potential role in managing chronic asthma is poorly defined. Patients who obtain a "cure" from a course of acupuncture may be able to attain an equivalent benefit from any of a huge variety of other alternative therapies in which they invest faith. Indeed, there is no sound theoretic basis for explaining a curative outcome in asthma or allergy other than by means of the psychic effect or the fact that improvement can occur when severe symptoms undergo natural reversion to the mean.

Unusual Drugs

Many unconventional drugs have been recommended for asthma and allergies, and reports of variable quality attest to their apparent clinical value. However, apart from the occasional glowing accounts of repeated successes in the hands of an enthusiast, there is rarely any quality follow-up with a valid report of benefit. Some of the agents that have previously been promoted include: papaverine, lobeline, analgesics, chloroform and other anesthetics, creosote, pituitary extracts, nitrates, marijuana, clonidine, methotrexate, triacetyloleandomycin, heparin, chlorpheniramine and other antihistamines. Many of the older drugs that were used in asthma and for nasal problems appeared to act as expectorant-emetics, and it is known that emetic drugs given in small dosages stimulate the gastro-pulmonary mucokinetic vagal reflex that results in loosening of inspissated respiratory secretions. Pungent spices offer the same benefit, although some patients are liable to experience allergic reactions to specific spices.

Unusual Techniques

It is impossible to record all the well-described but unusual techniques that are advocated as alternative methods for asthma and allergy management. One of the most interesting is the use of kinesiology, whereby an induced muscle weakness is alleged to be detectable when an allergic patient holds an allergen in their hand. This bizarre claim is the basis of NAET (an "allergy elimination technique") that uses acupuncture, acupressure, electromagnetic field therapies, massage or manipulation, elimination diets, and environmental control to treat or "cure" asthma and various allergies. Although practitioners write impressively about the science of such techniques, it is evident that this is "pseudo-science" and that the clinical information is based on anecdote rather than on controlled trials. It would be improper to suggest that such therapy is fraudulent, but it is reasonable to say that any healing that occurs is an outcome of a faith-based relationship between the patient and the therapist who utilizes impressive token therapeutic maneuvers.

The Placebo-Placebit Effect

Undoubtedly, much of orthodox healing occurs purely as a response to the intervention of an authority-figure healer who might use token diagnostic or therapeutic modalities that contribute only to the psychic responses that are inherent to most healing transactions. Thus, orthodox medicine is well aware of the healing value of prescribed, inactive medications, and it is acceptable for inert placebos to be given to patients by sincere physicians who believe that this offers an effective, legitimate form of healing. The term "placebo" might imply deceit: the word means "I will please", and this suggests that the prescriber knowingly uses an inert product to please the demanding patient. However, many physicians utilize medications that lack evidence of effectiveness when neither the physician nor the patient recognize that this is the case. If the physician and the patient jointly believe in the value of an "ineffective" remedy, this therapeutic token can be called a "placebit", meaning "It will please" (both the prescriber and the user).

Perhaps much of the benefit from many alternative remedies exist with a placebo effect. It is difficult to evaluate the effectiveness of alternative remedies who suspect fraud. Similarly, a negative relationship between treatment and outcome implied by defense attorneys has led to treatment exclusion without indication of effectiveness for many patients.

Table 3. Problems with Alternative Medicine

- Many are traditional
- Many are exotic
- Many are from other cultures
- Most lack logic
- Most studies are anecdotal
- Most studies are not controlled
- Good results can be attributed to placebo
- Good results can be attributed to faith
- Good results can be attributed to suggestion
- Unusual benefits
- Unusual benefits
- Unusual benefits

* Many of these claims have not been demonstrated in controlled trials.

Patients will often be cured by being endowed with faith in the typical physician. The typical physician uses herbs, homeopathy, and a complete lack of understanding of the power of advertising. The healer can be a placebo treatment or has a placebo effect.

Perhaps much of complementary and alternative medicine (CAM) practice constitutes placebo therapy. Numerous studies, analyses and meta-analyses of alternative diagnostic and therapeutic modalities suggest that, although there is a suggestion of benefit from many CAM modalities, no definite conclusion can be drawn. Many problems exist with alternative therapies, mainly with respect to their credibility (Table 3). It is difficult to carry out good quality double-blind, randomized controlled trials on alternative remedies. Moreover, a positive result is attacked by orthodox practitioners who suspect fraud in the conduct of the trial or self-deceit in the analysis of the findings. Similarly, a negative result is attacked by CAM enthusiasts who point out that treatments have to be individualized and that scientific studies do not duplicate the healing relationships which is an essential component of the therapy. It is inappropriately implied by defenders of dubious forms of CAM that the very different nature of the treatment excludes it from conventional forms of clinical evaluation, and that the best indication of effectiveness is the favorable testimonial record provided by satisfied patients.

Table 3. *Problems with Alternative Remedies*.*

- Many are traditional, and lack any evidence of effectiveness
- Many are exotic, and "proof" of effect is dubious
- Many are from individual practitioners; proof is "anecdotal"
- Most lack logical, scientific explanations for any effect
- Most studies are inferior and lack scientific rigor
- Most studies are never confirmed by other investigators
- Good results can be explained by statistical manipulation
- Good results are often limited to a minority of parameters
- Good results may occur as illness reverts to the mean
- Unusual benefits may imply intentional or unintentional fraud
- Unusual benefits may occur as a placebo effect
- Unusual benefits that require a new belief system are usually unbelievable

** Many of these concerns may apply to orthodox therapies. It is possible that higher quality studies may demonstrate objective benefits from several CM modalities*

Patients will continue to invest in CAM practitioners who attain the reputation of being endowed with greater healing qualities than are possessed or demonstrated by the typical physician. Furthermore, many patients feel they benefit from over-the-counter herbs, homeopathic remedies, nutraceuticals, and biologic restoratives, despite the complete lack of evidence of their effectiveness; this is a demonstration of the healing power of advertising that employs the potency of placebo therapies. Thus, the magic of the healer can be provided by proxy absorbed the patient is a strong believer in the treatment or has an open mind to new forms of therapeutic help.

Conclusion

The numerous CAM theories, practices, and therapeutic offerings that are widely available appeal to increasing numbers of patients and non-medical practitioners, and, to a remarkable degree, to an ever-increasing number of physicians and medical students. Most CAM remedies are no more effective than comparable orthodox counterparts; a large percentage are of little or no value, while some may be harmful. There is scant published evidence to support the use of even the most popular of the alternative treatments for asthma and allergies. Good quality trials are unlikely to be invested in evaluating the vast majority of these unconventional therapies and illogical nostrums, many of which simply appeal to an atavistic need that sick and worried people harbor that leads them to believe in magic and the incredible miracles of the natural healing process.

It is important to recognize that most patients are very willing to try alternatives, and some of these therapeutic options can readily be integrated into orthodox practices. Perhaps orthodox medicine should be thought of as an expression of scientific prose, while alternative therapies are the equivalent of poetic music. Undoubtedly, alternative techniques in the treatment of both **disease** and **dis-ease** appeal to some degree to everyone, since we all respect the incredible healing that can occur spontaneously in a person who believes in the body's recuperative powers. Suitable alternative therapies should be incorporated by all orthodox practitioners into their standard practices to ensure that their treatments resonate at a deep level with their patients, since those who are sick undoubtedly yearn for the magical healing that is traditionally inherent in the medical practices of the natural healer.

References

1. Beamon S, Falkenbach A, Fainburg G, Linde K. Speleotherapy for asthma. *Cochrane Database Syst Rev* 2000; CD 001741.
2. Bielory L, Lupoli K. Herbal interventions in asthma and allergy. *J Asthma* 1999; 36: 1-65.
3. Condemni JJ. Unproved diagnostic and therapeutic techniques. In: *Food Allergy: Adverse Reactions to Foods and Food Additives*, Metcalfe DA, Sampson HA, Simon RA (Eds), 1997, 2nd Edn, Oxford, Blackwell, pp. 541-550.
4. Cutler EW. *Winning the War Against Asthma and Allergies. A Drug-Free Cure for Asthma and Allergy Sufferers*. 1998, Albany, NY, Delmar Publishers.
5. Ernst E. "Alternative" therapies for asthma: reason for concern? *Chest* 2001; 120: 1433-1434.
6. Hackman RM, Stern JS, Gershwin ME. Complementary/alternative therapies in general medicine: asthma and allergies. In: *Complementary/Alternative Medicine. An Evidence-Based Approach*. Spencer JW, Jacobs JJ (Eds), 1999, St. Louis: Mosby, pp. 65-89.
7. Huntley A, Ernst E. Herbal medicines for asthma: a systematic review. *Thorax* 2000; 55: 925-929.
8. Lewith GT, Watkins ID. Unconventional therapies in asthma: an overview. *Allergy* 1996; 51: 761-769.
9. Hondras MA, Linde K, Jones AP. Manual therapy for asthma. *Cochrane Database Syst Rev* 2001; CD 001218.
10. Li XM, Sampson HA. Novel approaches to the treatment of food allergy. *Curr Opin Allergy Clin Immunol* 2002; 2: 273-278.
11. Li XM, Zang TF, Hwang CK et al. Food Allergy Herbal Formula -1 (FAHF-1) blocks peanut-induced anaphylaxis in a murine model. *J Allergy Clin Immunol* 2001; 108: 639-646.
12. Linde K, Jobst KA. Homeopathy for chronic asthma. *Cochrane Database Syst Rev* 2000; CD 000353.
13. Linde K, Jobst K, Panton J. Acupuncture for chronic asthma. *Cochrane Database Syst Rev* 2000; CD 000008.

14. Reilly D. *Ta* 350: 834-843.
15. Rotblatt M. 420-428.
16. Schapowal A. treating seas.
17. Ziment I. A. (Eds). 1997.
18. Ziment I. A. ment, Gershwin.
19. Ziment I. *Ta* 106: 603-614.

Discussion

de Weck: I th
rything into th
something like
depressed. In
tive way, but to

Ziment: I thi
are talking abo
even effect th
before him ma
cure patients.
to something
tors are very u
ners who have
stant worry th
and cold weat
think a lot of t
to be aware of
tic which is exp
make very sur
ate.

Dorpema: Wh
you think of th
these herbal m

Ziment: You
China? This to
only selected
all these Chin
in combination
their multiple
And they beco
of the remedie

14. Reilly D, Taylor MA, Beattie NGM et al. Is evidence for homeopathy reproducible? *Lancet* 1997; 350: 834-843.
15. Rotblatt M, Ziment I. Evidence-Based Herbal Medicine. 2002, Philadelphia, Hanley & Belfus, pp. 420-428.
16. Schapowal A (*Petasites* Study Group). Randomized controlled trial of butterbur and cetirizine for treating seasonal allergic rhinitis. *BMJ* 2002; 324: 144-146.
17. Ziment I. Alternative therapies. In: Asthma, Barnes PJ, Grunstein MM, Leff AR, Woolcock AJ (Eds), 1997, Philadelphia, Lippincott-Raven, pp. 1629-1705.
18. Ziment I. Alternative therapies in asthma. In: Bronchial Asthma. Principles of Diagnosis and Treatment, Gershwin ME, Albertson TE (Eds), 4th Edn 2001, Towata, NJ, Human Press, pp. 255-278.
19. Ziment I, Tashkin DP. Alternative medicine for allergy and asthma. *J Allergy Clin Immunol* 2000; 106: 603-614.

Discussion

de Weck: I think this is very exhilarating, but I wonder whether it is correct to put everything into the same basket. What do you say about old experiments of hypnosis or something like passive transfer of IgE antibodies, showing that the reaction cannot be depressed. In other words a number of these things can maybe influenced in an objective way, but to some extend by suggestion.

Ziment: I think that is really the interesting comment about all this. Because what we are talking about is psycho-neuroimmunology where the patients believe and faith can even effect the T cells. It is quite remarkable that throughout history, Messmer, and before him many other shamans of various type, have certainly cured patients and will cure patients. Probably you could show immunologic reactions of an important nature to something of a psychic stimulus. I am really worried in one sense that a lot of doctors are very upset by alternative medicine. On the other hand, many other practitioners who have to see patients every day and treat them for things like fatigue, and constant worry that they are allergic to this food and that food, and allergic to the weather, and cold weather make them sick, and wet weather give them a headache and so on. I think a lot of them can be treated at the psychic level with token therapy. What we got to be aware of is the difficulty that we can run into, of using scientific token therapeutic which is expensive or lay-person's token therapy which is usually cheap. We have to make very sure that the scientific therapy we are using is truly justified and appropriate.

Dorpema: Why did you leave out astrology in your list of remedies? Secondly, what do you think of the fact that in China serious scouting pharmacists are running around to these herbal medicine producers?

Ziment: You mean that we are hoping to bring back useful herbal medicines from China? This topic could go on for a long time, people are writing huge books on it. I only selected a bird's eye view of a very important topic. Is it worth while looking into all these Chinese drugs, 1800 or more, which are being used, and usually they are used in combinations? So, to do scientific work, you not only have to look at single plants and their multiple chemical constituents, but you also have to look at combinations of them. And they become too enormous a task and I do not think it will ever be done for most of the remedies that are available. And one of the things I can say is that 30 years ago