Can bee venom be an effective therapy for treating symptoms of Multiple Sclerosis and other disorders? The American Apitherapy Society, which celebrates its 25 Year Anniversary this year, serves as a clearing-house for information for persons interested in Apitherapy, alternative form of health care that uses bee hive products — including honey, pollen, propolis, royal jelly and bee venom — to treat many illnesses and to alleviate pain from injuries both chronic and acute. The organization reaches beyond the conventional Western medical model with a holistic approach to health and healing.

The Society notes that currently the most popular and well-known applications for honey bee venom therapy in the United States are for people suffering from Multiple Sclerosis (MS) and many forms of arthritis. They note that there is some scientific data supporting the use of Apitherapy for treatment of post-herpetic neuralgia, and that several articles were written in the first half of the 20th-Century about using bee venom in the treatment of osteoarthritis and rheumatoid arthritis, as well as some recent and ongoing research investigating Apitherapy's effect in MS, and that many anecdotal reports suggest that bee venom might have some usefulness in the treatment of various infectious, auto-immune, cardiovascular, pulmonary, and gastrointestinal diseases and in neuropathic pain and other chronic pain conditions.

A short article by DiscoveryHealth.com writers entitled "Bee Sting Therapy and MS" (12 July 2005. HowStuffWorks.com. <http://health.howstuffworks.com/medicine/tests-treatment/bee-sting-therapy-and-ms.htm> 15 April 2014), notes that for centuries, honey, bee pollen, and bee venom have been used to treat various ailments ranging from chronic pain to skin conditions, observing that Apitherapy was used by the ancient Egyptians as a homeopathic remedy for arthritis. Today, bee venom therapy, or bee sting therapy, has captured the attention of medical science as a potential homeopathic remedy for multiple sclerosis (MS) symptoms.

The article explains that bee venom therapy (BVT), or Apitherapy, somewhat counterintuitively uses the stings of live bees to relieve MS symptoms including pain, loss of coordination, and muscle weakness, and that stinging is not limited to any specific area of the body, since stings in different places seem to produce different results. The authors note that apitherapy researchers suggest that certain compounds in bee venom, namely melittin and adolapin, help reduce inflammation and pain, and that the combination of all the "ingredients" in bee venom somehow helps the body to release natural healing compounds in its own defense.

However, they point out that no major studies on BVT have been done, and that it is estimated that only about 50 U.S. physicians use Apitherapy to treat MS or other diseases, observing that the evidence of BVT helping MS patients, while encouraging, remains anecdotal. Nevertheless, they acknowledge that with more than 250,000 cases of multiple sclerosis nationwide, thousands of patients are believed to use bee venom as an alternative approach to interferon, corticosteroids, and other drugs typically used by conventional medicine to treat MS, and that advocacy and lay-experimentation with BVT have resulted in an estimated 10,000 people in the U. S. providing this therapy – including apitherapists, beekeepers, and acupuncturists, as well as those with no health

background according to the American Apitherapy Society, and with some patients opting to treat themselves, raising concerns among the medical establishment about lack of medical training among most practitioners, and risk of dangerous allergic reactions to the treatment.

They note that the popularity of and claims for bee venom therapy led Georgetown University School of Medicine in Washington, D.C. to conduct a one-year preliminary study, funded by the Multiple Sclerosis Association of America, to research apitherapy as a potential MS treatment.

That study, published in the journal Allergy and Asthma Proceedings, entitled: "A phase I study of the safety of honeybee venom extract as a possible treatment for patients with progressive forms of multiple sclerosis" (2005 Nov-Dec;26(6):470-6), was For the full commentary, visit:-authored by H.J. Castro, J . Mendez-Lnocencio, B. Omidvar, J. Omidvar, J. Santilli, H.S. Nielsen Jr, A.P. Pavot, J.R. Richert, and J.A. Bellanti of the International Center for Interdisciplinary Studies of Immunology and the Departments of Pediatrics at, Washington, DC, USA.

The study was conducted to evaluate the safety of bee venom extract as a possible treatment for patients with progressive forms of MS. The coauthors note that while various anecdotal reports suggest bee venom may be an effective treatment for patients with Multiple Sclerosis, patients taking the Apitherapy route may be subjected to real risk of serious allergic reactions as well as emotional and economic costs.

For the study a total of nine bee venom nonallergic patients with progressive forms of MS aged 21-55 and with no other illnesses were divided into four groups (A, B, C, and D) on a structured 1-year immunization schedule. Hyperreactivity to bee venom was evaluated by questionnaire, physical examination, and a battery of hematologic, metabolic, and immunologic tests. Responses to therapy were evaluated by questionnaire, functional neurological tests, and changes in measurement of somatosensory-evoked potentials.

The researchers report that although no serious adverse allergic reactions were observed in any of the nine subjects, four did experience worsening of neurological symptoms, requiring termination of their participation in the study, although this outcome could not be ascribed to side effects of the therapy.

Of the remaining five subjects, three felt that the therapy had resulted in subjective amelioration of symptoms and two showed objective improvement. The researchers conclude that while this preliminary study suggests safety, because of the small numbers studied there were no definite conclusions regarding efficacy, and therefor little evidence derived to support use of honeybee venom in the treatment of MS, and that it will take larger and more carefully conducted multicenter studies in order to establish efficacy.

Another study of bee sting therapy was published in the journal Neurology also in 2005, entitled "A randomized crossover study of bee sting therapy for multiple

sclerosis," (Neurology. 2005 Dec 13;65(11):1764-8. Epub 2005 Oct 12), For the full commentary, visit:-authored by T. Wesselius, D.J. Heersema, J.P. Mostert, M. Heerings, F. Admiraal-Behloul, A. Talebian, M.A. van Buchem, and J. De Keyser — all of the Department of Neurology at University Medical Center Groningen in Groningen, The Netherlands.

The Dutch researchers assigned 26 patients with relapsing-remitting or relapsing secondary progressive MS to 24 weeks of medically supervised bee sting therapy or 24 weeks of no treatment. Live bees (up to a maximum of 20) were used to administer bee venom three times per week.

They observe that the primary outcome was the cumulative number of new gadolinium-enhancing lesions on T1-weighted MRI of the brain. Secondary outcomes were lesion load on T2*-weighted MRI, relapse rate, disability (Expanded Disability Status Scale, Multiple Sclerosis Functional Composite, Guy's Neurologic Disability Scale), fatigue (Abbreviated Fatigue Questionnaire, Fatigue Impact Scale), and health-related quality of life (Medical Outcomes Study 36-Item Short Form General Health Survey).

The coauthors report that during bee sting therapy, there was no significant reduction in the cumulative number of new gadolinium-enhancing lesions. The T2*-weighted lesion load further progressed, and there was no significant reduction in relapse rate. There was no improvement of disability, fatigue, and quality of life, although bee sting therapy was well tolerated, and there were no serious adverse events. THey conclude that in this trial, treatment with bee venom in patients with relapsing multiple sclerosis did not reduce disease activity, disability, or fatigue and did not improve quality of life.

However, in other parts of the world, Apitherapy is employed much more widely than it is in the U.S. and Western Europe. An AFP Relaxnews report notes that in Romania, not only is bee venom used to treat multiple sclerosis, but also pollen for indigestion, and honey to speed healing of wounds, and that in India, China and Egypt, a resinous substance collected by bees from the buds of certain trees, known as "propolis," has been popular as an antiseptic.

"The hive is the oldest and healthiest natural pharmacy," says Dr. Claudiu-Octavian Mihaescu, MD, Vice President of the Scientific Commission and Head Physician at "DIMITRIE CANTEMIR" Military Highschool at Breaza , Romania, an osteopath, advocate of integrative medicine, and practitioner for more than 10 years in apitherapy and Hirudotherapy, (Use of leeches in medicine).

Dr. Mihaescu, who is director general of the Institute for Apicultural Research and Development in Bucharest, Romania, home of the world's Apitherapy medical centre which opened in 1984, notes that Apitherapy has been employed since ancient times and is likely as old as the practice of medicine, being that bees have been around for about 50 million years — long before the arrival of human beings on the scene. She observes that throughout human history people have used bee products in their diets, with the human body evolving contemporaneously with this dietary use of bee products. Dr. Mihaescu notes that ancient Egyptians applied bee stings to treat rheumatic

diseases, and the Roman historian and senator Tacitus (c. A.D. 56 – c. 120) refers to the imperial military's therapeutic use of bee stings.

Consequently, she observes that these products are recognized by the human digestive system and easily assimilated. Honey is digested from the mouth and reaches the bloodstream in just 20 minutes.

"Romania is a pioneer of apitherapy, which it recognized very early as a component of scientific medicine," AFP cites professor Theodor Charbuliez of South Freeport, Maine, commenting. Dr. Charbuliez is head of the Apimondia Standing Commission of Apitherapy., an institution for reflection, promotion, and deployment of Apitherapy globally. The AFP article cites Romania's last agricultural census in 2010, which counted 42,000 beekeepers and more than 1.3 million colonies of bees in the country.

The Commission's scientific and humanitarian mission is to promote development and the application, at international level, of research using beehive products with a medical destination, and promoting recognition of Apiculture as a link of the therapeutic chain. The Standing Commission of Apithérapy of Apimondia proposes the following definition:

"Apitherapy is a medical concept, based on a scientific approach reinforcing traditional knowledges, including:
- Protocols and standards for a beekeeping production with medical destination;
- Procedures for transforming beehives products, alone or in association with medicinal plants and their derivates (Api-pharmacopoeia);
- Clinical protocols integrating the use of api-pharmacopoeia and/or bees (Api-medicine)"

The functions of the Standing Commission of Apitherapy are cited as:
- to develop, set up and follow humanitarian projects directed towards the use of Api-medicine and Api-pharmacopoeia;
- to assist the demanding states in acquiring a certain level of medicinal independence;
- to communicate with the political, economical and scientific authorities;
- to develop a new sector of beekeeping activity with therapeutic destination;
- to promote the research and the scientific studies in Apitherapy;
- to teach and spread out the acquired knowledge and experience;
- to enhance the value of ecologic and human resources;
- to contribute to the development of Apimondia.

Between 1998 and 2000, the activities of the Commission of Apitherapy have been focused on elaboration of apiculture production protocols at therapeutic destination; development of humanitarian projects with green medicine, and more precisely Apitherapy, in economically less developed countries, eg: one project currently running in Cuba; and edition of a CD-ROM of Apitherapy mainly oriented to professionals of health and apiculture, with the objective to group and present the actual knowledge of the Commission in that domain.

The commission also publishes a journal, the ApitherapyReview newsletter of the Apitherapy Commission of Apimondia as a medium for sharing information, and to provide scientific review and certification of claims.

The Commission notes that many years of research in the Apitherapy field have resulted in more and more products being offered, and that while a large number of them are of good quality and have valid scientific references, there are also on the market products that are “worrisome,” because they threaten the credibility of a science thousands of years old, and could be used to discredit the whole validity of Apitherapy. Moreover, they observe that the public is not equipped to evaluate the quality of the products on sale in many markets, and by consequence, not adequately protected.

Consequently, the Apitherapy Commission of Apimondia has initiated a project to certify high quality Apitherapy products
This certification applies only to products available on the market. In order to establish criteria for such certification, the Commission are calling on reputable firms with bee products on the market for cooperation

The certification project has three phases. The first addresses identifying elected firms which meet the criteria of superior quality products. The second will be the construction of a model for the identification of top quality api-products using the information given by the selected firms. The third will focus on medical claims attached to these certified products. At this point, the Commission is only working on the first phase.

Sources:
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