

Astragalus: Chinese medicinal herb enlisted in fight against allergic rhinitis

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For those with seasonal allergies, like hay fever, the A. membranaceus activated root extract needs to be taken one month before the start of the season as a preventive measure. – AFP

A herb long used in traditional Chinese medicine for diabetes has been recently proven effective for allergic rhinitis, with some even touting the plant as a 'superfood'.

Take a look around you, is there someone you know who has symptoms of allergies?

This might be in the form of allergic rhinitis — runny and/or blocked nose, watery eyes and sneezing; food allergies — itching, rashes, and even, difficulty breathing, upon consumption of the trigger food; eczema or contact dermatitis — itchy, red skin rashes; and allergic asthma — difficulty breathing upon exposure to the allergen, among others.

There is a pretty good chance that you know one or more persons who have some form of allergy, or even have allergies yourself, as the Malaysian Society of Allergy and Immunology estimates that one in three Malaysians suffer from some sort of allergy.

In fact, allergies are a rising medical trend both globally and locally. Experts predict that if the present trend continues, around half the country's will be affected by ailments caused by allergies by 2020.



While allergies are unlikely to be fatal for most sufferers, they do seriously affect quality of life. This is especially so for those who are allergic to substances that are commonly found in the environment, like dust mites, pet dander and pollen.

According to Croatian medical doctor and researcher Dr Silva Pecanic, the current goals of allergic rhinitis management is to improve quality of life and minimize side effects from treatment.

“There are three main methods of management. First, of course, is the allergen avoidance. But this requires a lot of education of the patient, a lot of discipline, habit changes, and is quite restrictive,” she says, noting that when one family member has an allergy, the entire family usually suffers along as well.

“The other method is pharmacotherapy. Current pharmacotherapy includes nasal steroids, which have a lot of side effects like dryness, and after long-term use, leads to thinning of the nasal mucosa, making it prone to bleeding or infections. There are also a lot of side effects for antihistamines, which are often used to decrease allergy symptoms, like dryness, drowsiness, dizziness, and sometimes, trouble urinating,” she says.

The third method of treatment is with leukotriene inhibitors. However, Dr Pecanic notes that the US Food and Drug Administration has updated the precautions on this group of drugs to include

warnings on reported adverse neuropsychiatric side effects like agitation, aggression, problems sleeping, hallucinations and suicidal thoughts.

She says: “All these treatments are directed at the final symptoms — after the histamine attack. And all these patients usually change their therapy because they are never fully satisfied with their medication — changing from one antihistamine to another, and the nasal steroids and the nasal decongestants.”



Regulating allergy genes

Dr Pecanic, who is currently the Regulatory Department head of the South-East European Croatian-based health supplements and non-prescription drugs company Milsing, was in town recently to speak about a new allergy treatment based on the herb *Astragalus membranaceus*.

Also known as *huang qi*, *bei qi* or *huang hu huang qi* in Chinese, the dried root of *A. membranaceus* has actually been used in traditional Chinese medicine (TCM) for thousands of years. Its primary function in TCM is as an energizing tonic and boosting the immune system, as well as treating diabetes.

It is this last function that led a group of researchers at the Ruder Bokovic Institute in Zagreb, Croatia, to take a deeper look at the root of this herb 14 years ago.

Milsing Product Development head and pharmacist Iva Martic shares: “During the research, they discovered that the activated root extract of *A. membranaceus* substantially influences some of the genes which are involved in the inflammatory reaction.

“After that, they performed a series of tests, and animal and clinical trials, to show that it does affect more than 20 genes involved in the inflammatory process.”

It was at this stage in 2003 that Milsing, which develops such products commercially, got involved.

According to Martić, their research showed that the activated root extract of *A. membranaceus* helps to regulate the genes involved in the Th1 (Type 1 helper T cell) pathway. (See *What are helper T cells?*)

Increased activity of this pathway helps balance out the Th2 (Type 2 helper T cell) pathway, which is the one responsible for releasing histamine and other inflammatory chemical mediators that cause allergy symptoms.



Providing effective relief

In 2007, Dr Pecanic and her colleagues conducted a randomised, double-blind clinical trial at the University Hospital Dubrava in Zagreb. The results were published in *Phytotherapy Research* in 2010.

Forty-eight patients with seasonal allergic rhinitis were randomly put into two groups for the six weeks of the trial. Two-thirds of them received the activated root extract of *A. membranaceus*, while one-third received a placebo. No other pharmacological treatment for allergies was allowed.

According to Dr Pecanic, participants on the root extract showed significant improvement for rhinorrhoea (runny nose) after three weeks on treatment, and itching or burning eyes after six weeks, compared to those on the placebo.

In addition, subjective evaluations on treatment efficacy from patients and doctors respectively both showed an agreement that the root extract was significantly more effective than the placebo.

She adds: “There were very few adverse reactions, and all of them were actually symptoms from the allergy. The conclusion was that there were no adverse reactions related to the root extract.”

While the treatment for the clinical trial was administered at the start of the allergy season, Dr Pecanic says that the treatment works best when begun a month before exposure to the allergen or allergy season (for example, spring in temperate countries when pollen starts to spread), as a preventive measure.

Patients need to take the treatment as long as there is risk of exposure to the allergen.

However, those who have perennial or constant allergies can also start the treatment at any time, as then, it will work to reduce the symptoms they are already suffering from. They would need to take a stronger dose of the root extract until their symptoms subside, whereupon they can continue with the maintenance dose until they are no longer at risk of being exposed to the allergen.

Dr Pecanic says that it takes up to about a week in such patients for the treatment to start showing effect. She adds that they can also combine the root extract with their usual pharmacologic treatments for symptom relief.

Although patients will probably have to continue taking the root extract for as long as they have allergies, which is usually lifelong, Dr Pecanic notes: “It is a natural product; it does not have side effects. And it is much better to take such products than drugs with side effects. It is safe.”