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**File: ■ Astragalus (*Astragalus membranaceus*)
■ Seasonal Allergic Rhinitis
■ Efficacy and Safety**

HC 070691-381

Date: July 31, 2009

RE: Study Finds Astragalus Formula Beneficial in Treating Seasonal Allergic Rhinitis

Matkovic Z, Zivkovic V, Korica M, et al. Efficacy and safety of *Astragalus membranaceus* in the treatment of patients with seasonal allergic rhinitis. *Phytother Res.* Jun 5, 2009 [Epub ahead of print].

The symptoms of seasonal allergic rhinitis (SAR) include sneezing, runny nose, nasal passage obstruction, watery eyes, and itchy nose, throat, and eyes. The purpose of this randomized, double-blind, placebo-controlled clinical trial was to assess the efficacy of an "herbal-mineral complex" containing an extract of astragalus (*Astragalus membranaceus*) root in the treatment of SAR. Astragalus is used in traditional Chinese medicine (TCM), and research has indicated that it stimulates the immune system.¹

The trial was conducted from May to October 2007 at the University Hospital Dubrava in Zagreb, Croatia. Patients with histories of moderate to severe SAR and positive skin prick tests to grass or weed pollen were eligible. Patients with positive skin prick tests for tree pollen were excluded. The patients provided blood samples and completed the self-administered mini Rhinoconjunctivitis Quality of Life Questionnaire (RQLQ). The mini RQLQ includes 14 questions covering 5 domains: activity limitations, practical problems, nasal symptoms, eye symptoms, and other symptoms. Each item was rated on a 7-point scale from 0 (no impairment) to 6 (severely impaired). The total reflective symptom score (TSS) was also assessed. The TSS includes ratings of the severity of symptoms over the previous 24 hours on a scale of 0 (none) to 3 (severe). Individual symptoms included rhinorrhea, nasal congestion, sneezing, and itching or burning eyes.

The patients were randomized to take 2 capsules twice daily of either astragalus (n=27) or an identical appearing placebo (n=14) for 6 weeks. Astragalus was harvested in the Hunan Province of China and extracted with water and ethanol (final extract ratio: 18:1 dried root:extract). The astragalus capsules contained 80 mg of astragalus extract standardized to contain 40% polysaccharides and calcium-aluminum-silicate. The patients returned for 2 more visits after 3 and 6 weeks of treatment. The patients and the physicians rated the overall severity of symptoms and the response to treatment on a 5 point scale from 1 (worsening) to 5 (significant

improvement). A blinded cytologist performed nasal smears in order to assess the eosinophils on a 4 point scale from 0 (none) to 3 (almost all cells on smear eosinophils).

Out of 48 patients who began the study, 7 withdrew early (5 in the astragalus group and 2 in the placebo group). There was no statistically significant difference in the number of drop-outs between the groups. Reasons for withdrawal included severe SAR symptoms (n=3), lost to follow-up (n=2), and poor compliance (n=2). There were no statistically significant demographic or disease differences between the 2 groups at baseline. The patients were studied during their respective allergy seasons: grass pollen (May-June, n=26) and weed pollen (August-October, n=22).

After 3 weeks of the treatment, there was a statistically significant difference in the rhinorrhea score between the 2 groups (P=0.048). There were no other significant inter-group differences in individual symptom scores. At the end of the study, the investigators and patients gave astragalus significantly higher efficacy ratings compared to the placebo (P=0.003 and P=0.025, respectively). After 6 weeks, astragalus significantly improved TSS and mini RQLQ scores compared to baseline levels (P=0.001 and P<0.001, respectively). For the placebo group, TSS scores were significantly improved compared to baseline levels after 6 weeks (P=0.04). In the astragalus group, significant improvements from baseline were observed for the symptoms of rhinorrhea, sneezing, and itching after 3 weeks (P=0.02, P=0.06, and P=0.04, respectively). The changes from baseline in the astragalus group were still significant after 6 weeks of treatment (rhinorrhea: P=0.01, sneezing: P=0.03, itching: P=0.03). There were no significant changes from baseline for individual symptom scores in the placebo group. The researchers also performed a post hoc analysis of the 22 patients with weed pollen allergies. There were significant differences between the placebo and astragalus groups after 3 and 6 weeks of treatment in TSS scores (3 weeks: P=0.037, 6 weeks: P=0.022) and mini RQLQ scores (3 weeks: P=0.017, 6 weeks: P=0.001). The patients and investigators gave significantly higher efficacy ratings to astragalus compared to the placebo (P=0.001 for both). During the study, 10 patients reported a total of 15 mild to moderate adverse events, including rhinosinusitis, pharyngitis, enterocolitis, and nausea. None were connected to the study drug.

The authors speculate that commencing astragalus treatment before the allergy season begins may be more effective. They conclude that this study provides "a significant number of positive signals" indicating that the herbal-mineral formulation of astragalus used in this study can be therapeutically effective against SAR. Multicenter clinical trials with larger samples of patients are needed to confirm the trends observed in this study.

—Marissa Oppel, MS

References

1. Milot B. Astragalus review - immunostimulant and cardioprotective. *HerbClip*. October 31, 2003 (No. 060133-243). Austin, TX: American Botanical Council. Review of Monograph. *Astragalus membranaceus* in *Alternative Medicine Review*. 2003;8(1):72-77.

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