P.O. Box 144345 Austin, TX 78714-4345 ▪ 512.926.4900 ▪ Fax: 512.926.2345 ▪ www.herbalgram.org

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FILE: ▪ Southernwood (*Artemisia abrotanum*)
▪ Nasal Spray
▪ Allergic Rhinitis

HC 070145-267

Date: October 29, 2004

RE: Efficacy of a Nasal Spray Preparation of Southernwood (*Artemisia abrotanum*) for Allergic Rhinitis

Remberg P, Bjork L, Hedner T, Sterner O. Characteristics, clinical effect profile and tolerability of a nasal spray preparation of *Artemisia abrotanum* L. for allergic rhinitis. *Phytomedicine.* 2004;11(1):36–42.

Southernwood (*Artemisia abrotanum*) is best known as a pleasant-fraganced, shrubby artemisia widely grown in herb gardens, with a reputation as a moth-repellant in saches. However, preparations of the plant have also been used in traditional medicine to treat a variety of disorders and diseases, including upper airway disease, since Medieval and Renaissance times. Four main groups of constituents have been isolated and characterized from this plant: terpenes, flavonols, coumarins, and cinnamic acid derivatives. From these four groups, several pharmacologically active ingredients have been identified (e.g., 1,8-cineole, linalool, davanone, scopoletine, and casticin), which are believed to be responsible for the therapeutic (anti-inflammatory, expectorant, and spasmolytic) effects on the upper airway system. The potential therapeutic efficacy of a new nasal topical formulation containing essential oils and flavonols extracted from southernwood was explored in this "proof of concept" study.

The plant used in this study was of the genotype "Tycho," which is characterized by a predominance of the terpenes davanone and 1,8-cineole (50% and 40%, respectively, in this case), the spasmolytic flavonols casticin and centaureidin, and some quercetin analogues. The formulation was standardized to contain 4 mg essential oils/mL and 2.5 μg flavonols/mL. Men (n = 10) and women (n = 2) aged 21–62 years with allergic rhinitis, allergic conjunctivitis, or bronchial obstructive disease were instructed to apply 1–2 puffs of the nasal spray into each nostril at the first occurrence of allergic rhinitis symptoms or shortly before exercise that would be anticipated to evoke bronchial obstruction. The subjects were instructed to report the specific symptoms that they experienced before and after administration of the nasal spray and any side effects resulting from treatment.

Symptom scoring was done subjectively with the use of categorical scales ranging from a score of 0 (no allergic symptoms) to 6 (symptoms requiring bed rest or hospital care).

On the basis of the symptom scores, "significant nasal and ocular symptom relief was rapid and almost complete" after the first application of the nasal spray, and nearly all of the subjects rated their symptoms as being "considerably or partially improved." The therapeutic efficacy experienced after the first administration of the spray was maintained with repeated administration of the spray. The nasal spray was well tolerated by all 12 subjects, even after repeated use; however, all patients reported a "slight to moderate nasal stinging sensation" that lasted between 5 and 20 seconds. This sensation was not considered "unpleasant" and did not prevent further use. No other untoward effects were reported, and no desiccation of the mucous membranes of the nose was observed.

The main finding of this study was that the nasal spray preparation containing southernwood "induced a pronounced symptom relief in patients with allergic rhinitis" after a single application and after repeated applications. In addition, symptoms related to allergic conjunctivitis were also relieved. Furthermore, the onset of action and relief of nasal symptoms (e.g., congestion, rhinorrhea, and sneezing) was rapid, occurring within minutes of application. The duration of symptom relief ranged up to several hours after administration. The mechanism of action was unclear; however, the authors thought it feasible that the antiallergenic, anti-inflammatory, expectorant, and antispasmolytic properties of the spray's active ingredients reduced the degree of exudation and inflammation of the nasal mucosa and the conjunctiva of the subjects. This spray has potential use as an alternative or supplemental treatment in patients with allergic rhinitis who experience an inadequate therapeutic response or side effects to conventional therapy. Controlled trials are needed to further explore this potential.

—Brenda Milot, ELS

The American Botanical Council has chosen not to reprint the original article.