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HerbClip™

File: ■ *Pelargonium sidoides*
■ Rhinosinusitis

HC 120696-398

Date: April 15, 2010

RE: Liquid Pelargonium Extract Provides Acute Symptom Relief in Rhinosinusitis

Bachert C, Schapowal A, Funk P, Kieser M. Treatment of acute rhinosinusitis with the preparation from *Pelargonium sidoides* EPs 7630: a randomized, double-blind, placebo-controlled trial. *Rhinology*. Mar 2009;47(1):51-58.

Clinical studies have demonstrated that the EPs® 7630 (Dr. Willmar Schwabe GmbH & Co.; Karlsruhe, Germany) special extract of *Pelargonium sidoides* reduces the severity and duration of acute bronchitis and tonsillopharyngitis in adults and children.[1] Acute rhinosinusitis (ARS) is characterized by swelling of the nasal mucosa, nasal discharge, sinus pressure, and headache. ARS is often treated with antibiotics, which have a "limited or controversial" efficacy. The biological activities of *P. sidoides* and its isolated constituents include direct in vitro antibacterial and immunomodulatory effects. This multi-center, prospective, double-blind clinical trial was designed to assess the efficacy and safety of the EPs 7630 ethanolic extract of the roots of *P. sidoides* in the treatment of ARS of "presumably bacterial origin."

Viral and bacterial ARS are difficult to differentiate in a setting, so the study was started after the seventh day of infection in order to exclude viral ARS. Sinus punctures to confirm bacterial ARS were not performed. Patients with ARS at 11 treatment centers in Kiev, Ukraine were randomized with a computer-generated randomization list to receive either EPs 7630 or an "indistinguishable" placebo for up to 22 days. The patients (age: 18-60 years) were enrolled from November 2003 to April 2004. Eligible patients were diagnosed with radiographically confirmed ARS and had Sinus Severity Scores (SSSs) of at least 12. The SSS rates 6 signs and symptoms of bacterial ARS on a score of 0 (not present) to 4 (very severe), including headache, maxillary pain, sinus pain worse with pressure, nasal obstruction, purulent nasal discharge, and purulent postnasal discharge. The patients took 60 drops (3 mL) of the placebo or EPs 7630 3 times daily at least 30 minutes before or after meals, providing a 9 ml daily dose (twice the manufacturer's recommended adult dosage for other acute respiratory tract infections including acute bronchitis and the common cold). The patients documented their use of the assigned treatment in diaries and were allowed adjunctive saline inhalations, if necessary. The change in SSS was the primary outcome measure. The 100 mm EQ-VAS (EuroQol Group; Rotterdam, The Netherlands) was used to measure health-related quality of life from 0 (worst state of health) to 100 (best state of health). The patients and

the investigators used the Integrative Medicine Outcome Scale (IMOS) to rate the treatment outcome. The investigators recorded the data using electronic case forms. Sinus x-rays were performed both pre- and post treatment.

Out of 104 patients randomized, 103 were included in the intention to treat (ITT) analysis (EPs 7630: n=51; placebo: n=52), and 84 were included in the per protocol (PP) analysis (EPs 7630: n=41; placebo: n=43). There was 1 drop out who did not receive treatment. In addition, 11 patients withdrew from the EPs 7630 group (reason not stated: n=1; major protocol violations: n=10) and 9 withdrew from the placebo group for major protocol violations. According to the ITT analysis, the average SSS decreased by 5.5 points in the EPs 7630 group and 2.5 points in the placebo group compared to baseline values after 7 days of treatment (95% confidence interval [CI] 2.0 to 3.9; P<0.00001). The SSS was significantly less in the EPs 7630 group compared to the placebo group on days 7, 14, and 21 (P<0.0001 for all). The PP analysis confirmed the results of the ITT analysis.

Significantly more patients in the EPs 7630 group compared to the placebo group had no pathological findings (P<0.0001) and/or had a substantial improvement with a "normal assessment" (mucosal thickening at the upper or lower border ≤ 6 mm) in the maxillary sinus (P=0.0004) at day 21. The radiographic findings for the frontal and ethmoid sinuses were not significantly different. The EPs 7630 group also had significantly greater improvements from day 0 to day 7 in Sino-Nasal Outcome Test 20 (SNOT-20) and SNOT-MI scores compared to the placebo group (P<0.0001 and P=0.0001, respectively). The EPs 7630 group also had significantly more IMOS "major improvement" ratings by the investigators than the placebo group (P<0.0001). The patient IMOS ratings were similar. At day 7, the EQ-VAS rating was 13 mm higher for the EPs 7630 group compared to the placebo group. According to the number needed to treat (NNT) analysis, treatment with EPs 7630 would result in 1 extra complete remission for every 2 patients treated. The researchers did not observe clinically significant changes in laboratory safety parameters or vital signs. In the EPs 7630 group, 6 patients reported adverse events, compared to 2 patients in the placebo group. None of the adverse events reported were considered serious by the investigators. There were 4 adverse event reports in the EPs 7630 that may be related to the treatment: 3 gastrointestinal complaints and 1 allergic skin reaction.

The authors conclude that EPs 7630 is well-tolerated and has a clinically relevant beneficial effect in the treatment of "ARS of presumably bacterial origin." They state "EPs 7630 should be considered as a possible first line of treatment even in patients suffering from acute rhinosinusitis of presumably bacterial origin." Additional studies are required to confirm the results of this prospective clinical trial in the treatment of bacterial ARS.

—Marissa Oppel-Sutter, MS

Reference

1.Oppel M. Review on the traditional use and the science on *Pelargonium sidoides*. *HerbClip*. May 29, 2009 (No. 120683-377). Austin, TX: American Botanical Council. Review of A historical, scientific and commercial perspective on the medicinal use of *Pelargonium sidoides* (Geraniaceae) by Brendler T, van Wyk BE. *J Ethnopharmacol.* Oct 2008;119(3):420-433.

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