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FILE: ▪Stinging Nettle (*Urtica dioica*)
▪Benign Prostatic Hyperplasia
▪Lower Urinary Tract Symptoms (LUTS)

HC 040664-317

Date: November 29, 2006

RE: Long Term Use of Stinging Nettle Improves Lower Urinary Tract Symptoms

Safarinejad, MR. *Urtica dioica* for treatment of benign prostatic hyperplasia: a prospective, randomized, double-blind, placebo-controlled, cross-over study. *J Herbal Pharmacother*. 2005;5(4):1-11.

Stinging nettle (*Urtica dioica*) is used in herbal medicine to treat urinary tract infections. This study examined the effect of treatment with stinging nettle root extract on lower urinary tract symptoms (LUTS) in patients with benign prostatic hyperplasia (BPH). The clinical trial which took place in Iran had a double-blind, randomized, and placebo-controlled cross-over study design. Subjects aged 55-72 years with a 1-3 year history of LUTS due to BPH (n=620) were enrolled in the clinical trial. At baseline, the subjects' symptoms were evaluated using the International Prostate Symptom Score (IPSS) questionnaire. In addition, a complete medical history, physical examination, and tests were conducted, including complete blood count, urine analysis, prostate serum specific antigen (PSA), transrectal and urinary tract ultrasonography, postvoid residual volume (PVR), and maximum urine flow (Qmax). Subjects returned for monthly check-ups throughout the treatment period. A table of random numbers was used to assign patients to the study medication (stinging nettle root extract) (n=305) or to a placebo (n=315). The study medication consisted of a standardized extract of stinging nettle root. Each subject received the study medication (120 mg/dose, 360 mg/day) or the placebo 3 times daily with meals for 6 months. At the end of the trial, subjects were unblinded. Subjects in the placebo group were allowed to voluntarily cross over to stinging nettle treatment for an 18 month follow-up study; subjects receiving the study medication were allowed to continue treatment during the follow-up study.

Of 621 subjects recruited, 558 completed the trial, but no subject withdrew due to adverse effects from the study medication. After 6 months, subjects receiving the stinging nettle extract had significantly decreased IPSS scores, compared with subjects receiving the placebo ($P<0.002$). The IPSS scores indicated a 40% decrease in the symptoms of the study medication group and a 9% decrease in the symptoms of the placebo group. The peak

urinary flow rate (Qmax) improved by 77% from baseline for the study medication and 31% from baseline for the placebo group. The improvement in Qmax was significantly different between the 2 groups ($P<0.05$). The postvoid residual urine (PVR) was significantly improved in the study medication group, compared with baseline values ($P<0.05$). There was no significant difference in PVR for the placebo group after 6 months of treatment. In addition, prostate size significantly decreased from baseline in the study medication group ($P<0.001$), but not in the placebo group. There was no significant difference in PSA values for either group. At the 18 month follow-up, all symptoms were significantly improved in subjects receiving the stinging nettle extract, when compared with subjects who never received treatment ($P<0.001$). Symptoms in subjects who received the placebo and then crossed over to receive the study medication improved as much as symptoms in subjects who received the study medication initially. There was no additional effect when treatment with stinging nettle was continued for 18 months, but the initial improvements seen during the 6-month study remained stable.

The study has a number of important limitations. The authors describe the analysis as intention to treat, but they did not include 20% of patients who were excluded from the study for various reasons; this large rate of exclusion has the potential to bias the study findings and is not an intention to treat analysis. Also, the extract was described as standardized, but there is no mention of what marker in the extract was used for the standardization. The placebo was described as identical, but there is no description of the contents of the placebo. There is also no reporting of whether subjects were adequately blinded (i.e., did subjects know they were taking placebo?).

Nonetheless, these results offer some preliminary evidence that long-term treatment (up to 18 months) with stinging nettle root might substantially improve lower urinary tract symptoms in men with BPH. The degree of improvement is impressive, with an 8 point improvement in the IPSS in 6 months, compared to a 1.5 point improvement with placebo. It is interesting to note that serum PSA values remained unchanged throughout the treatment period, indicating that the effect on urinary tract symptoms may occur through a novel mechanism of action. The mechanism of action and active constituents need to be determined. If these results are replicated in other studies, this therapy has great potential and may be as effective as currently approved pharmaceutical drugs.

—Marissa Oppel, MS

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