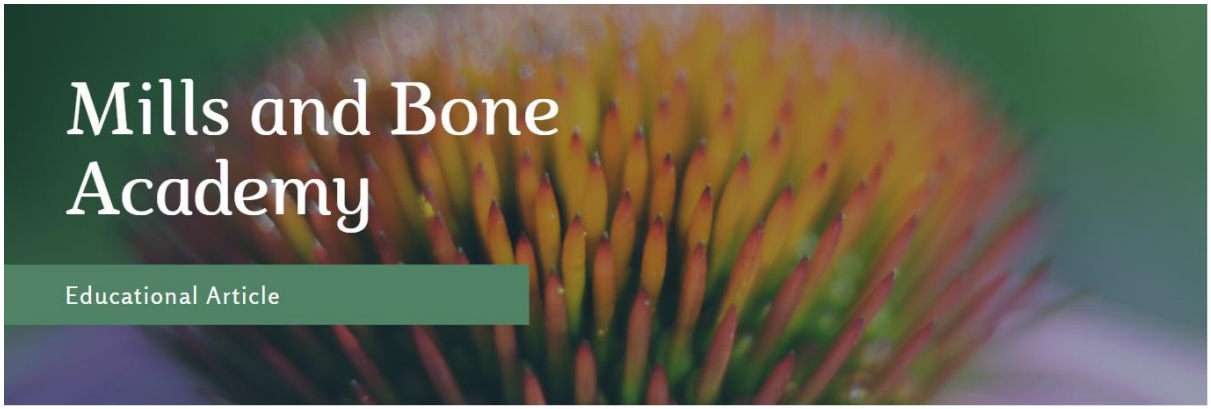

Saw Palmetto: Impressive Clinical Evidence – Kerry Bone

A recent and much publicised clinical trial published in the New England Journal of Medicine (NEJM) found that saw palmetto provided no benefit in the treatment of an enlarged prostate (BPH, benign prostatic hyperplasia).[i] But this single negative study needs to be viewed in the context of all the published trials. When this is done, the clinical proof behind the use of saw palmetto in BPH remains overwhelmingly positive.

The approach to the conventional management of BPH has changed over the last decade or so according to a recent study.[ii] It was found that surgery for BPH decreased by 17.6% in the decade, with patients undergoing surgery when older (3.1 years older on average). What was the reason for this decline? The answer is an increasing reliance on drugs for the management of BPH symptoms. In the 1980s the conventional view was generally that surgery for BPH was the only option. From this perspective, the use of herbs to manage BPH was viewed with much scepticism in medical circles, especially in the English-speaking world. Now the paradigm has shifted and the vast majority of BPH patients are treated with drugs.[ii] These are mainly alpha-adrenergic antagonists (alpha-blockers) which relax the smooth muscle of the prostate, thereby relieving obstruction to the bladder outlet. Given this shift, the use of herbal therapy for BPH seems less radical than before. In fact, if herbs are shown to be as good as or better than alpha-blockers in well-conducted clinical trials, there is a strong case for these to become frontline treatments for the management of BPH symptoms because of their lower risk of side effects.

Despite the negative study in the NEJM, there is a strong case for saw palmetto, probably the best known herb used to treat BPH. In recent years the evidence which backs up its use has grown significantly. What the research is showing is that saw palmetto (particularly the oily extract of this palm berry known as the liposterolic extract), as well as being more effective than placebo, is at least as good as or even more effective than the conventional drugs used to treat this common disorder.

A meta-analysis is where the results of several small clinical trials are combined to effectively make one big trial. The reason behind this is to give the trial greater significance, since larger trials are considered to be a better reflection of the real life effects of a treatment. A meta-analysis of the liposterolic

extract of saw palmetto (LESP) in BPH has recently been published combining the results of 17 trials for more than 4000 patients.[iii]

One of the problems with BPH is that the urine flow becomes much thinner due to the restriction of the urethra caused by the enlarged prostate. Another significant clinical problem is the need to get up several times in the night to urinate (nocturia) due to the reduced bladder capacity. The meta-analysis found that the mean placebo effect on peak urinary flow rate was an increase of 1.20 mL/sec. The estimated effect of saw palmetto (LESP) was a further increase above placebo 1.02 mL/sec, which means that the herbal treatment was associated with an overall increase in peak urinary flow of 2.22 mL/sec. This represents a clinically significant 15 to 20% increase. Effects on nocturia were less striking due to the influence of one large study involving 396 patients which showed no difference to placebo treatment. Placebo was associated with a reduction in the mean number of nocturnal voids of 0.63 and there was a further reduction attributable to saw palmetto of 0.38. Hence the use of saw palmetto (LESP) was associated with an average reduction of one event per night in terms of nocturnal voiding, which again is clinically significant.

Another significant publication was a subset analysis from a larger French study known as the PERMAL study. The original PERMAL study was published in 2002 and compared saw palmetto (LESP) with the alpha-blocker tamsulosin (Flomax).[iv] Over one year in 704 patients the two treatments were found to be as effective as each other for BPH. The subset analysis published in 2004 examined results for patients with severe lower urinary tract symptoms (LUTS) of BPH.[v] Severe LUTS was defined as an International Prostate Symptom Score (IPSS) greater than 19. Analysis was performed on 124 patients with severe LUTS (59 receiving saw palmetto and 65 receiving tamsulosin). After 12 months, IPSS had decreased by 7.8 with saw palmetto and by 5.8 with tamsulosin. The irritative symptom subscore improved significantly more with saw palmetto (-2.9 versus -1.9 with tamsulosin). The superiority of saw palmetto in reducing irritative symptoms appeared at month 3 and was maintained up to month 12. In an editorial comment on this PERMAL study subset analysis (for the patients with severe LUTS), Brown and Emberton wrote:[v]

> "There is no reason not to take this study seriously. It was part of a European multicentre large-scale study that was well designed and thought out … Overall it appears that phytotherapy is as valid a pharmacotherapy as alpha-blockers and 5-alpha reductase inhibitors in the management of men with BPH/LUTS. Indeed it may have less adverse effects, be better tolerated and cheaper."

It also appears that there are additional benefits from combining saw palmetto with stinging nettle root, another well known herbal treatment for BPH.[vi] The efficacy and tolerability of a combination of 320 mg/day of saw palmetto (LESP) and 240 mg/per day of nettle root extract (about 1.5 g of root) was investigated in elderly male patients suffering from LUTS caused by BPH. A total of 257 patients were randomised to treatment with the herbal combination or placebo for 24 weeks. Patients treated with the saw

palmetto/nettle root combination exhibited a substantially higher reduction in IPSS after 24 weeks of double-blind treatment than patients in the placebo group (6 points vs 4 points). This drop of IPSS score of 6 points is considerably better than those seen overall in trials using saw palmetto alone.[iii]

Another interesting study looked at the effects of saw palmetto (LESP) on the bleeding which follows after prostate surgery.[vii] There was a control group that did not receive any saw palmetto. The amount of bleeding was significantly lower for the men receiving the saw palmetto for 8 weeks before their surgery, reducing the need for blood transfusions. The saw palmetto treatment also reduced the need for catheterisation to help urination.

Not all the published trials with saw palmetto (LESP) were successful. Chronic prostatitis is a common and often debilitating condition that can affect men of all ages. Its cause is mostly unknown. A trial found that saw palmetto on its own caused no appreciable long-term improvement in men with chronic prostatitis.[viii] However, the clinical experience of some herbalists suggests that saw palmetto can be valuable for this disorder, in combination with other herbs and treatments.[ix]

The case is well established that saw palmetto (LESP), especially in combination with nettle root, is a highly effective frontline treatment for the management of BPH. The recent clinical trials summarised build upon an already impressive volume of evidence for these two herbal agents.[x] The case of saw palmetto is a good example of where one negative trial on a herb can receive much publicity, while the much greater number of positive trials are ignored by the mass media.

References

[i] Bent S, Kane C, Shinohara K et al. *N Engl J Med* 2006; **354**(6): 557-566

[ii] Vela-Navarrete R, Gonzalez-Enguita C, Garcia-Cardoso JV et al. *BJU Int*. 2005; **96**(7): 1045-1048

[iii] Boyle P, Robertson C, Lowe F et al. *BJU Int* 2004; **93**(6): 751-756

[iv] Debruyne F, Koch G, Boyle P et al. *Eur Urol* 2002; **41**(5): 497-506

[v] Debruyne F, Boyle P, Calais Da Silva F et al. *Eur Urol* 2004; **45**(6): 773-780

[vi] Lopatkin N, Sivkov A, Walther C et al. *World J Urol* 2005; **23**(2): 139-146

[vii] Pecoraro S, Annecchiarico A, Gambardella MC et al. *Minerva Urol Nefrol* 2004; **56**(1): 73-78

[viii] Kaplan SA, Volpe MA, Te AE. *J Urol* 2004; **171**(1): 284-288

[ix] Bone K. *Clinical Guide to Blending Liquid Herbs. Herbal Formulations for the Individual Patient*. Churchill Livingstone, USA, 2003, pp. 400-404

[x] Mills S, Bone K. *Principles and Practice of Phytotherapy: Modern Herbal Medicine*. Churchill Livingstone, Edinburgh, 2000, pp. 523-533