

Effectiveness on urinary symptoms and erectile function of Prostamev Plus® vs only extract *Serenoa repens*

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Summary Prostatic inflammation is widespread in the male population. Two groups of 50 patients each with symptoms of prostatic inflammation and ecocolor Doppler indicative of prostatitis were identified. Both groups were further subdivided into two sub-groups (respectively A1, A2, B1, and B2). Group A1 underwent therapy with oral levofloxacin 500 mg daily for 10 days plus co-treatment with oral *Serenoa repens* (320 mg) plus Bromeline plus Nettle (Prostamev Plus®) daily for two months; Group A2 with oral levofloxacin 500 mg daily for 10 days plus oral *Serenoa repens* extract 320 mg/day for two months; Group B1 specific antibiotic treatment for 10 days (included levofloxacin if sensitive) plus co-treatment with oral *Serenoa repens* (320 mg) plus Bromeline plus Nettle (Prostamev Plus®) daily for two months; Group B2 with specific antibiotic treatment for 10 days plus *Serenoa repens* 320 mg/day for two months. The groups treated with Prostamev Plus® in comparison to the groups treated with *Serenoa repens* extract (saw palmetto) achieved better improvements of both IPSS score, urinary flow and sexual life.

KEY WORDS: Prostatitis; Urinary flow; Erectile function.

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INTRODUCTION

Prostatic inflammation is very common and it is a frequent presentation to our outpatient urological and andrology clinic. However, patients, despite the evidence of inflammation at color Doppler examination of the prostate, often show negative results of seminal culture or urethral swabs. For this reason the presence of positive laboratory findings cannot be considered essential for the diagnosis of prostatitis. *Serenoa repens* (SR) is a remedy for prostatitis which is recognized in the literature showing effectiveness in both patients with prostatic hyperplasia (BPH) and in those with prostatic volume in the normal range. Several products on the market associate *Serenoa repens* to other substances with anti-inflammatory action.

The aim of the study is to evaluate the effectiveness of co-treatment with *Serenoa repens* (320 mg) plus Bromeline plus Nettle (Prostamev Plus®) in comparison to *Serenoa*

repens alone in reducing the symptoms of prostatitis in patients with inflammatory prostatitis (bacterial and nonbacterial) detected at ecocolor Doppler. It was also evaluated the impact of this combination therapy on quality of life of individuals and their erectile function.

MATERIALS AND METHODS

We identified two groups of 50 patients each, matched for age and symptoms of inflammation of the prostate and with ecocolor Doppler of the prostate indicative of prostatitis.

Inclusion criteria were: age between 40 and 65 years, digital rectal examination (DRE) negative for prostate cancer, ecocolor Doppler indicative for prostatitis at enrollment, IPSS > or = 15, prostatic volume < 60 mL, RPM < 50 mL, reported normal libido and testosterone levels between 1.75 and 7.80 ng/mL.

Exclusion criteria: ongoing therapy with alpha-lytic, finasteride, dutasteride or tadalafil; presence of kidney or bladder stones, neurogenic bladder, bladder diverticulum, urethral stricture, bladder or prostate cancer, recent abdominal surgery, psychiatric therapy.

Group A consisted of patients (mean age 58.2) with urethral swab or seminal culture negative for common germs, *Mycoplasma* and *Chlamydia*; group B (mean age 57.9) included patients with microbiology positive for *E. coli* and *Enterococcus faecalis*.

Both groups were further divided into two subgroups (respectively A1-A2 and B1-B2) which were subjected to different treatments. Thus we obtained four sub-groups of 25 subjects each.

The treatments administered are shown in Table 1.

During the study, 6 patients were excluded from follow up due to the need to take other drugs or for other personal reasons. All patients were assessed at enrollment and after two months with uroflowmetry, evaluation of post-voiding volume (PVV), IPSS (*International Prostatic Symptoms Score*), NIH-CPSI (*National Institute of Health-Chronic Symptom Index*) and IIEF-5 (*International Index of Erectile Function-5*).

The efficacy of treatment within each subgroup was assessed by T test for paired data (within each group, comparing data before and after treatment).

The comparison between the different groups was performed using chi-square test.

Table 1.
Treatment administered.

Group A1 = levofloxacin 500 mg daily for 10 days + Serenoa repens (320 mg) plus Bromeline plus Nettle (Prostamev Plus®) daily for two months.
Group A2 = levofloxacin 500 mg daily for 10 days + Serenoa repens (320 mg)/day for two months.
Group B1 = specific antibiotic treatment for 10 days (including levofloxacin if sensitive) + co-treatment with Serenoa repens (320 mg) plus Bromeline plus Nettle (Prostamev Plus®) daily for two months.
Group B2 = specific antibiotic treatment for 10 days + Serenoa repens (320 mg)/day for two months.

Figure 1.
Results of uroflowmetry.

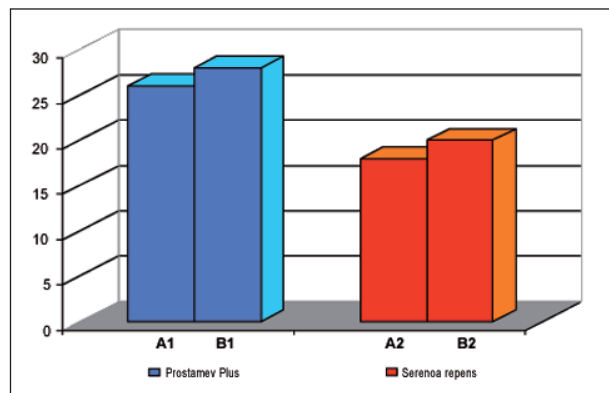
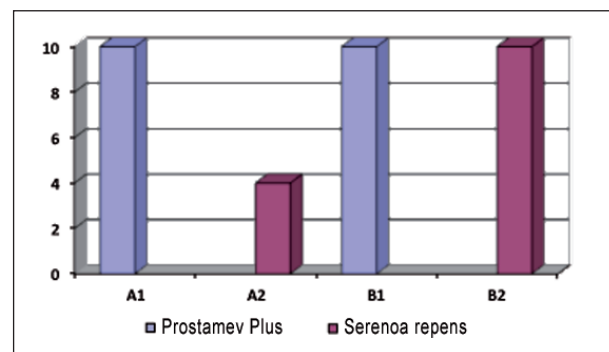


Table 2.
Results of NIH-CPSI (N° of cases = 96).

	PAIN (T0/2 months)	MICTURITION (T0/2 months)	QUALITY OF LIFE (T0/2 months)
A1	8.1/5.2	7.5/5.4	10.2/6.3
A2	8.2/5.5	7.1/5.3	9.7/7
B1	8.7/4.5	8.2/4.7	8.9/5.5
B2	8.5/5.7	7.1/5.8	8.5/6.1

Figure 2.
Data about sexual life.



RESULTS

Uroflowmetry (Q_{max}):

Patients in group A1 showed an improvement of the average value of Q_{max} from 23 ml/sec to 29 ml/sec

(+ 26%), while in the group A2 average value of Q_{max} rose from 22 ml/sec to 26 ml/sec (+ 18%).

Patients in group B1 showed an improvement of the average value of Q_{max} from 19 ml/sec to 24 ml/sec (+ 28%), while in the group B2 Q_{max} increased from 21 ml/sec to 25 ml/sec (+ 20%).

Therefore the groups A1 and B1 showed an higher overall improvement than the groups A2 and B2 (both groups showed significant increases in flow after 2 months of therapy).

Post Voiding Volume (PVV)

Not statistically significant Improvements were observed (p > 0.1).

IPSS

All groups showed a reduction of mean IPSS score after treatment, although of limited clinical significance.

NIH-CPSI

Results of NIH-CPSI scores are listed in Table 2.

IIEF-5

Finally, patients of groups A1, B1 and B2 showed an improvement of sexual life according to the IIEF-5 questionnaire by an average of about 10% in comparison to 4% of the group A2.

DISCUSSION

The groups treated with *Serenoa repens* (320 mg) plus *Bromeline* plus *Nettle* (*Prostamev Plus*®), with or without antibiotic therapy, showed an improvement in all parameters compared to the groups treated with saw palmetto, with or without associated antibiotic therapy. This effect could be explained by the effectiveness of the combination of *Serenoa repens*, *Bromeline* and *Nettle*.

Bromeline has mainly an anti-inflammatory effect and is particularly effective in localized inflammation especially in the presence of edema. The use of *Bromeline* is safer than other anti-inflammatory drugs due to the difference in the mechanism of action. In fact, conventional non steroidal anti-inflammatory drugs (NSAIDs) inhibit cyclooxygenase, so blocking the synthesis of prostaglandins. On the contrary, *Bromeline* "hijacks" this synthesis, increasing the production of prostaglandins with anti-inflammatory activity to the detriment of those with pro-inflammatory activity thereby preventing the gastrointestinal damage typical of NSAIDs. This difference in the mechanism of action explains the synergy that it may have with NSAIDs, thus obtaining an enhancement of their anti-inflammatory effects. Furthermore it is known its synergism with antibiotic and anticancer therapies.

Nettle (*Urtica dioica*) confirmed a synergistic action with antibiotics in prostatitis (10-12).

CONCLUSIONS

Both groups of patients treated with the combination of *Serenoa repens*, *Bromeline* and *Nettle* in association with antibiotic therapy showed an improvement in all the

parameters considered in this study after 2 months of therapy.

The advantage of using a co-treatment that associates *Nettle* and *Bromeline* to *saw palmetto* is evident both in the improvement of flowmetry values and in the scores of IIEF-5 and NIH-CPSI questionnaires (groups A1 and B1 vs A2 and B2).

There were no reported side effects in addition to those provided for the simple antibiotic therapy.

The groups treated with the combination of *Serenoa repens*, *Bromeline* and *Nettle* obtained substantial improvements from the point of view of sexual life.

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