



Management of Chronic Prostatitis and Chronic Pelvic Pain Syndrome: what are the Different Options?

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ABSTRACT

chronic prostatitis/chronic pelvic pain syndrome is a prevalent urological disorder among men of all ages. Risk factors include conditions that facilitate introduction of bacteria into the urethra and prostate. Patients with chronic prostatitis/pelvic pain syndrome typically report genital or pelvic pain (in or around the penis, perineum, scrotum) lasting >3 months. Treatment remains controversial and not consensual, the purpose of this article is to remind different therapeutic options available through a literature review.

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Introduction

Chronic prostatitis remains an enigma in urology. Since its description in 1968 by Mears and Stamey, and the first attempt of classification 10 years later, the knowledge of this pathological entity was based on assumptions and poor data from the literature.

However, the last ten years have seen significant advances in research on chronic prostatitis, resulting in improved therapeutic approach based on evidence.

The treatment of a bacterial chronic prostatitis is well codified and consensual, far from the case of chronic prostatitis/chronic pelvic pain syndrome.

The purpose of this article is to take stock of the different treatment currently offered through a scientific approach based on proofs.

General supportive measures :

Although the efficiency was not demonstrated in clinical trials, caffeine alcohol and spicy foods, bath seat are often not recommended to patients with CP/CPPS.

The role of ejaculation is controversial because some men reported an exacerbation of symptoms, while others reported a significant improvement especially after regular ejaculations. (1) (2)

Stress has also been implicated in the CP/CPPS.

In effect, Ulrich and al reported that most patients who consulted were anxious probably because of the intense disabling pain. (3)

On the basis of these findings, stress reduction is often recommended.

It can help to reduce disability and response to pain. Furthermore, men with CP/CPPS are likely to suffer the neuropsychological level than the normal population.

Treatment of CP/CPPS

The treatment of CP/CPPS is not codified for multiple reasons.

- The pathogenesis of CP/CPPS is certainly complex and multifactorial.
- There are not enough randomized controlled trials against placebo for the proposed treatment including the most used.
- There is no test or diagnostic marker .

Randomized trials against placebo, who used the NIH score (National Institutes of Health-chronic prostatitis symptom index) as a work tool, were selected and analyzed.

Antibiotic

The antibiotic remains a reference treatment of CP/CPPS.

Despite the uncertainties about the infectious origin of this disease and the lack of evidence and effectiveness. Two well conducted methodological studies have questioned the benefit of antibiotic treatment.

In 2003, Nickel and al noted an improvement in symptoms assessed by the NIH in two groups :levofloxacin and placebo prescribed for 6 weeks.(4)

In 2004, Alexander and al noted a modest reduction in the NIH score in 4 groups :(5)

- ciprofloxacin alone
- tamsulosine alone
- tamsulosine combined to ciprofloxacin
- placebo alone

prescribed for 6 weeks.

Therefore it can be concluded that there is currently no evidence of efficacy of antibiotics treatment and that it can not be recommended.

Alpha blockers

Patients with CP/CPPS often suffer from obstructive and irritative lower urinary tract disorders objectified by urodynamic examinations.

Alpha blockers may also have a direct effect on pain.

It has been demonstrated that prostatic inflammation leads to the secretion of a mediator (neuro mediator P)

responsible to changing of perception algetic message at the spinal cord, and that this change is inhibited by tamsulosin.(6) A randomized study on the role of alfuzosin was conducted in patients with CP/CPPS demonstrated a statistically significant improvement of the NIH score.(7)

However the effect only lasted a few months and disappeared when the treatment was stopped.

This results with tamsulosin are heterogeneous, Nickel and al noted a significant effect while Schaeffer and al demonstrated contrary against placebo. (8)

In the latter group, the duration of treatment was short and included patients who already have taken alpha bloklers in the past but without symptomatic improvement.(9)

Cheah and al found that Terazosin proved more effective than placebo.(10)

Association antibiotic/alpha bloker:

The discrepancy between the two randomized but uncontrolled studies and the lack of control against placebo does not allow formal conclusion.

Anti-inflammatory

Anti inflammatory plays and important role in CP/CPPS. Indeed, the high rate of inflammatory cytokines, the low rate of anti-inflammatory cytokines (IL-10) endorphin or prostaglandins have been correlated to the severity of the symptoms of patients with CP/CPPS, compared to healthy patients.(11) (12) (13)

Non steroidal anti-inflammatory have long been used in CP/CPPS.

In an uncontrolled study, it was demonstrated that ketoprofen suppositories and nimesulid orally proved extremely effective in these patients.

Corticosteroids also have potent anti-inflammatory activity.

In a small uncontrolled study, Bates Talbot and al found that prednisolone could treat symptoms of patients. (14) Nevertheless, we must carefully weigh the risk benefit ratio given the multiple side effects of corticotherapie.

Phytotherapy

In a open study, 90 patients received a tablet of cernilton N three times a day for 6 months.(15)

Excluding patients with anatomical factors (urethral stenosis, neck sclerosis, prostatic stones), that have not responded to treatment 36 % were cured, while 42 % saw there symptoms improved.

In a randomized double blind study testing the pollen extract, Ellist and al reported a significant clinical improvement compared to a placebo group.(16)

Saw palmetto is the most commonly used phytochemical product in prostate disorders.

It's expected to act , in part, by dual anti-inflammatory and anti-androgenic mechanism.

Quercetin, a polyphenolicbiflavonoids biologically very active and often found in red wine, green tea and onions has anti-inflammatory properties.

In a prospective, randomized double blind controlled study against placebo using the NIH score 500 mg of Quercetin was administrated twice daily for 4 weeks. The patients had significant improvement compared to placebo . This had been demonstrated because the Quercetin causes a remarkable decrease in prostaglandin E2 levels in prostatic secretion.

PGE2 in an indirect marker of prostatic inflammation.

According to all this works herbal medicine seems interesting in the treatment of CP/CPPS with a satisfactory safety benefit. (17)

Hormonotherapy :

In 2004, a randomized controlled study against placebo leads by Nickel and all, showed that finasteride, used in combination with other therapy enables a sligh alleviation of symptoms.(18)

Theauthors haveneverrecommendedfinasteridemonothera py and in the absence of an adenomatous component involving urinary disorders.

Pentosanpolysulfate sodium

The PPS is a mucopolysaccharide indicated for treatment of interstitial cystitis.

In 2005, Nickel and al compared 100 patients to a placebo.

The duration of the treatment was 16 weeks, the authors concludedthe significant superiority of PPS but this study has not been confirmed.(19)

Prostatic massage

It promotes drainage of prostatic duct clogged and the penetration of antibiotic in the gland.

It could also destabilize bacterial biofilms and stimulate neuromuscular receptors, that line the side wall of the pelvis. In an uncontrolled study the prostate massage 2 to 3 times a week for 4 or 6 weeks with concomitant antibiotic therapy had some clinical benefits in patients with CP/CPPS.(20)

Acupuncture

Several authors have noted the efficacy of acupuncture in patients with CP/CPPS.

Lee and al compared acupuncture to a stimulated treatment in 99 patients with NIH score greater than or equal to 15. (21)

After a 24 week follow up, the authors found a significant superiority of acupuncture but this recent study request confirmation.

Pelvic perinealrehabilitation :

CP/CPPS patients often complains of pain and spasm of the pelvic floor muscles.

Rehabilitation helps to relax these muscles groups and help to better use their .

This could have a positif effect on symptoms and also improve sexual function in some men with CP/CPPS. Unfortunately, very few clinical trials have been published regarding the efficacy of this type of therapy.

Therapy by extra corporeal shock waves

In 2009, Zimmerman and al compared the therapy by extra corporeal shock waves perineal to a stimulated treatment in 60 patients.(22)

After 12 weeks follow up the authors found a significant superiority of effective treatment, but this recent study also requires confirmation.

Mini invasive surgery

In 80's, it was popular to try the prostate trans urethral resection, unfortunately the results were very mixed. Since, surgery is not recommended in this context.

The emergence of minimally invasive technique has changed the situation .

Indeed, the TUNA (transurethral needle ablation) has proved effective in two randomized studies.(23) (24)

Through several uncontrolled studies, the TUMT was considered by several authors as a real alternative with proven effective in men with CP/CPPS.

The main question is whether the prostate tissue necrosis induced by high temperature could worsen advantage of inflammatory component of this disease.(25)

Under these conditions, controlled studies are needed before recommending the routine use of such therapy, at least in terms of scientific approach based on evidence.

Other treatments :

Treatment of neuropathic pain.

Mepaticin. (26)

Electromagnetic stimulation.(27)

Sacral neuromodulation.

Conclusion

Despite all the published studies and the many treatments on offer, it is not possible to identify a recognized and validated treatment of CP/CPPS.

It's nevertheless possible to draw some conclusions from the analysis of this literature:

Antibiotics, anti-inflammatory, and hormotherapy are not recommended

Alpha blockers could be effective in newly diagnosed patients who had never received treatment provided they are prescribed for 12 weeks to 6 months

Phytothérapie and pelvic floor muscle training could be effective

Invasive surgery or minimal invasive prostate surgery are not recommended.

Advanced in treatment of CP/CPPS can only come from new basic and clinical researchs.

Competing interests

The authors declare no conflict of interest.

Authors' contributions

All the authors have read and agreed to the final manuscript.

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