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Clinical Consultation Guide

Management of Chronic Prostatitis/Chronic Pelvic Pain Syndrome

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1. Introduction

Chronic prostatitis is a nebulous and heterogeneous condition that has been a thorn in the side of patients and physicians alike from an era that predates its official definition. The current classification system, described by the 1995 National Institutes of Health (NIH) Workshop on Chronic Prostatitis, defines category III prostatitis, or “chronic prostatitis/chronic pelvic pain syndrome” (CP/CPPS) as the “presence of genitourinary pain in the absence of uropathogenic bacteria detected by standard microbiologic methodology” [1]. CP/CPPS encompasses an amalgam of clinical phenotypes that may present with urinary complaints, pain, sexual complaints, and/or psychiatric complaints; consequently, it has been largely resistant to monotherapy [2]. CP/CPPS can be further categorized into IIIa and IIIb groupings, differentiated by the presence or absence of white blood cells, respectively, in expressed prostatic secretions. Clinically, this distinction does not appear to make a significant difference in the treatment of patients; therefore, it is not part of our treatment algorithm [3]. Here we

present our approach to this frustrating and often debilitating condition.

2. Evaluation

Presenting complaints of CP/CPPS may include penile, pelvic, perineal, lower abdominal pain, pain during or after ejaculation and/or urination, urinary frequency and/or sensation of incomplete emptying, and erectile dysfunction [4,5]. A full history and physical examination should be the start of any work up for this constellation of complaints. As CP/CPPS is often a diagnosis of exclusion, efforts should be made to rule out competing differential diagnoses such as infection, malignancy, and urolithiasis. History should include onset, severity, and duration of symptoms, as well as aggravating and relieving factors. A review of systems should elicit manifestations of common comorbid conditions such as depression, anxiety, fibromyalgia, and irritable bowel syndrome (IBS). The NIH Chronic Prostatitis Symptom Index should be administered to men being worked up

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for this condition [6]. Particular attention should be paid to question 9, which assesses the impact of CPPS on quality of life, as CPPS can have a significant detrimental effect on patients' overall well-being.

Physical examination should be aimed at ruling out alternative sources of symptoms as well as qualifying the patient's presenting complaint. A full genitourinary examination should include assessment of patency of the urethral meatus, palpation for scrotal abnormalities or tenderness, and a digital rectal exam (DRE), which should be performed after collection of the pre-prostatic massage urine specimen. DRE should remark on any tenderness of the prostate itself, as differentiated from pelvic floor muscle spasm, assessed through palpation of muscles lateral, posterior, and inferior to the gland. A prostatic massage can be conducted to collect prostatic fluid or post-massage urine. Postvoid residual should be quantified to assess for urinary retention. A PSA test should be conducted for any man with a concerning DRE, for those in the age range that are interested in screening, or any man with a strong family history of prostate cancer. CP/CPPS alone is not an indication for cystoscopy; however, this test should be performed for any man with gross or microscopic hematuria or in whom urethral stricture is suspected. Patients with appropriate history or symptoms should be tested for sexually transmitted infection.

Laboratory work up should include microscopic urinalysis, standard urine culture if indicated, and culture of post-massage urine or prostatic fluid. If standard pre- or post-massage urine cultures are positive, then by definition, the patient does not have CP/CPPS and should be treated by an alternative algorithm (for chronic bacterial prostatitis or urinary tract infection [UTI]). Urine may also be examined for uncommon organisms, including *Chlamydia trachomatis*,

Ureaplasma urealyticum, *Mycoplasma hominis*, or *Mycoplasma genitalium* [7–9].

3. Treatment

Once a diagnosis of CP/CPPS is made, we advocate treating the patient with multimodal therapy based on their clinical phenotype. Our approach is the UPOINT system, which classifies patients into Urinary, Psychological, Organ-specific, Infection, Neurologic/systemic, and Tenderness domains (Fig. 1) [10]. "Urinary" patients, whose chief complaints are urgency, frequency, nocturia, and incomplete emptying, are treated with alpha-blockers, diet modification, and/or anticholinergics. "Psychosocial" patients have predominant depressive symptoms, stress, and poor coping mechanisms and are treated with targeted cognitive behavioral therapy, counseling, and antidepressants. "Organ-specific" patients are typified by specific complaints that implicate the prostate and/or bladder as symptom drivers. Prostate indicators could include prostate tenderness, white blood cells in prostatic fluid, hematospermia, or prostate calcifications, and are treated with anti-inflammatories such as quercetin. Pain with bladder filling and relief with voiding associated with significant frequency suggests interstitial cystitis (IC) and/or bladder pain syndrome (BPS) for which the American Association of Urology guideline treatment choices for IC/BPS should be followed [11]. "Infection" patients have gram-negative bacilli or enterococci in prostate specimens but do not meet the criteria for category I or II prostatitis (acute infection and recurrent UTI with same organism, respectively). These patients may have a history of prior resolution with antibiotics and can be treated with targeted anti-

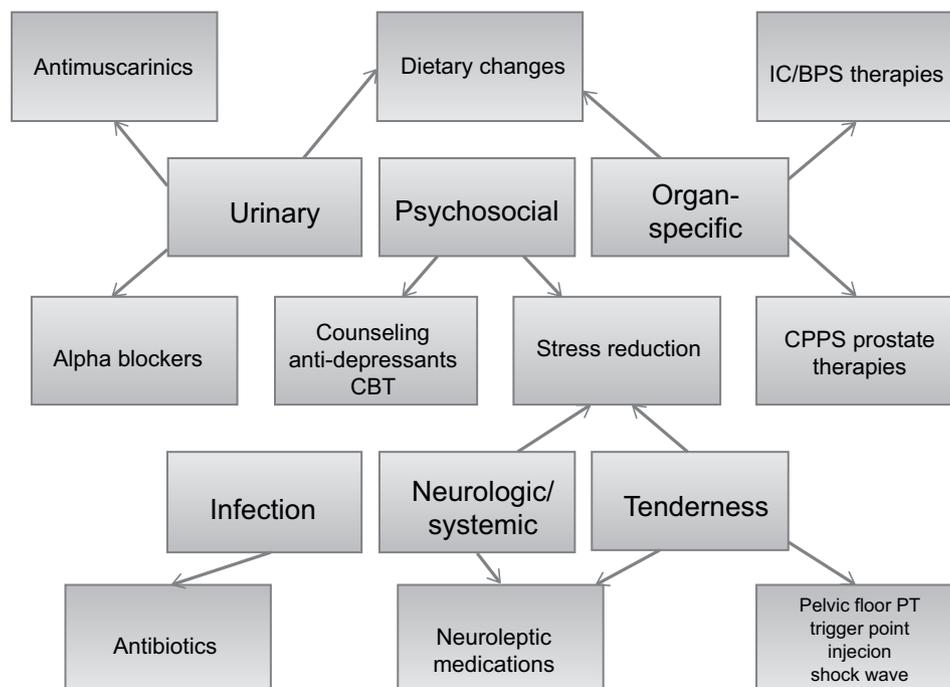


Fig. 1 – UPOINT algorithm, with modifications, from Khurana and Shoskes [16].

BPS = bladder pain syndrome; CBT = cognitive behavior therapy; CPPS = chronic pelvic pain syndrome; IC = interstitial cystitis; PT = physical therapy.

infective agents. “Neurologic” patients tend to have pain outside of the pelvis and may have comorbid IBS, fibromyalgia, and other chronic pain complaints. We suggest treatment with gabapentinoids, amitriptyline, neuromodulation, and cannabinoids, with great care taken to avoid chronic opioids. “Tenderness” patients will have palpable tenderness in pelvic floor muscles, spasm, and trigger points. They are best served with pelvic floor physical therapy and muscle relaxants. New studies have suggested adjuvant use of trigger point injection or low intensity shockwave in addition to physical therapy in men with this phenotype [12,13].

The UPOINT approach has shown utility and effectiveness across a range of providers and patient populations. The number of positive domains correlates with overall symptom severity [10]. In a prospective study of 140 Chinese men with CP/CPPS, classification and treatment using the UPOINT system lead to at least a six-point improvement in 75% of men [14]. A similar study at our own institution demonstrated an 84% response rate in 100 men using UPOINT [15].

The last 20 yr have seen dramatic progress in the field of chronic prostatitis. As the use of UPOINT and multimodal therapy becomes more widespread, CP/CPPS has developed into a manageable, if not curable, chronic condition.

Conflicts of interest: Shoskes is a consultant for Farr Labs and Aquinox. Equity interest in Triurol. Nickel is a consultant for Farr Labs and Medifocus, investigator for Aquinox.

References

- [1] Krieger JN, Nyberg L, Nickel JC. NIH consensus definition and classification of prostatitis. *JAMA* 1999;282:236–7.
- [2] Nickel JC, Shoskes DA, Wagenlehner FM. Management of chronic prostatitis/chronic pelvic pain syndrome (CP/CPPS): the studies, the evidence and the impact. *World J Urol* 2013;31:747–56.
- [3] Sung YH, Jung JH, Ryang SH, Kim SJ, Kim KJ. Clinical significance of national institutes of health classification in patients with chronic prostatitis/chronic pelvic pain syndrome. *Korean J Urol* 2014;55:276–80.
- [4] Magistro G, Wagenlehner FM, Grabe M, Weidner W, Stief CG, Nickel JC. Contemporary management of chronic prostatitis/chronic pelvic pain syndrome. *Eur Urol* 2016;69:286–97.
- [5] Polackwich AS, Shoskes DA. Chronic prostatitis/chronic pelvic pain syndrome: a review of evaluation and therapy. *Prostate Cancer Prostatic Dis* 2016;19:132.
- [6] Litwin MS, McNaughton-Collins M, Fowler Jr FJ, et al. The National Institutes of Health chronic prostatitis symptom index: development and validation of a new outcome measure. *J Urol* 1999;162:369–75.
- [7] Brunner H, Weidner W, Schiefer HG. Studies on the role of *Ureaplasma urealyticum* and *Mycoplasma hominis* in prostatitis. *J Infect Dis* 1983;147:807–13.
- [8] Weidner W, Brunner H, Krause W. Quantitative culture of *Ureaplasma urealyticum* in patients with chronic prostatitis or prostaticitis. *J Urol* 1980;124:622–5.
- [9] Poletti F, Medici MC, Alinovi A, et al. Isolation of *Chlamydia trachomatis* from the prostatic cells in patients affected by nonacute abacterial prostatitis. *J Urol* 1985;134:691–3.
- [10] Shoskes DA, Nickel JC, Dolinga R, Prots D. Clinical phenotyping of patients with chronic prostatitis/chronic pelvic pain syndrome and correlation with symptoms severity. *Urology* 2009;73:538–42.
- [11] Hanno PM, Erickson D, Moldwin R, Faraday MM. Diagnosis and treatment of interstitial cystitis/bladder pain syndrome: AUA guideline amendment. *J Urol* 2015;193:1545–53.
- [12] Tadros NN, Shah AB, Shoskes DA. Utility of trigger point injection as an adjunct to physical therapy in men with chronic prostatitis/chronic pelvic pain syndrome. *Transl Androl Urol* 2017;6:534–7.
- [13] Guu SJ, Geng JH, Chao IT, et al. Efficacy of low-intensity extracorporeal shock wave therapy on men with chronic pelvic pain syndrome refractory to 3-As therapy. *Am J Mens Health* 2018;12:441–52.
- [14] Gui X, Zhao C, Ou ZY, et al. Use of the UPOINT phenotype system in treating Chinese patients with chronic prostatitis/chronic pelvic pain syndrome: a prospective study. *Asian J Androl* 2015;17:120–3.
- [15] Shoskes DA, Nickel JC, Kattan MW. Phenotypically directed multimodal therapy for chronic prostatitis/chronic pelvic pain syndrome: a prospective study using UPOINT. *Urology* 2010;75:1249–53.
- [16] Khurana K, Shoskes DA. A phenotypic approach to the evaluation and treatment of men with chronic pelvic pain syndrome. In: Shoskes D, editor. *Urological Men’s Health*. Current Clinical Urology. Totowa, NJ: Humana Press; 2012.