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CLASSIFICATION (TRADITIONAL AND NATIONAL INSTITUTES OF HEALTH) AND DEMOGRAPHICS OF PROSTATITIS

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ABSTRACT

This article reviews the National Institutes of Health (NIH) classification system for prostatitis and summarizes the baseline analysis of the Chronic Prostatitis Cohort Study, a longitudinal study, which has enrolled 488 patients diagnosed with category III prostatitis. The prevalence of category IIIA in this cohort was 54% to 90%, depending on the cut points used. In all, 8% (37 of 488) had ≥1 localizing uropathogen. However, leukocyte and bacterial counts did not correlate with severity of symptoms as assessed by the NIH Chronic Prostatitis Symptom Index. Continued follow-up study of this cohort will likely answer important questions about the natural and treated history of this syndrome. UROLOGY **60:** 5–7, 2002. © 2002, Elsevier Science Inc.

Chronic prostatitis (CP) is a disabling condition affecting 10% to 14% of men of all ages and ethnic origins.[1,2] As early as 1980, the National Ambulatory Care Survey reported 20 office visits per 1000 men/year for symptoms compatible with prostatitis.[3] Despite an estimate showing that 50% of men will develop symptoms of prostatitis at some point in their lives, most symptomatic men do not have bacterial prostatitis, for which treatment and management are usually successful.[4,5] To date, there is no standardized method of diagnosis and treatment of CP.

The National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK) Chronic Prostatitis Workshop held in 1995 resulted in a consensus working definition and classification of prostatitis syndromes[6] as follows:

- **Category I**: *Acute bacterial prostatitis* is an acute infection of the prostate.
- **Category II**: *Chronic bacterial prostatitis* is a recurrent infection of the prostate.
- **Category III**: *Chronic nonbacterial prostatitis/chronic pelvic pain syndrome* (CP/CPPS), where there is no demonstrable infection. Subgroups of this class are: (**A**) *inflammatory CPPS*, where leukocytes are found in the semen, expressed prostatic secretions (EPS), or urine obtained after prostate massage (voided bladder urine–3 [VB-3]); and (**B**) *noninflammatory CPPS*, where no evidence of inflammation is found in the semen, EPS, or VB-3.
- **Category IV**: *Asymptomatic inflammatory prostatitis*, where there are no subjective symptoms, but white blood cells are found in prostate secretions or in prostate tissue during an evaluation for other disorders.

Unlike patients in categories I and II, patients with category III prostatitis do not have any detectable infection of the prostate, as determined by conventional microbiologic techniques. Abnormalities in the EPS are the primary objective features of category III prostatitis, and chronic pain is the primary subjective symptom. Most patients with chronic prostatitis are considered to be in category III.[3]

The NIDDK funded the Chronic Prostatitis Collaborative Research Network (CPCRN) in 1997 to conduct basic and clinical research in CPPS. The CPCRN developed a prospective longitudinal Chronic Prostatitis Cohort (CPC) Study (in which patients are still being observed) and also coordinated the development and validation of a symptom severity index, the National Institutes of Health Chronic Prostatitis Symptom Index (NIH-CPSI). This index is an integral component of the symptom measurements within the CPC Study and

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will be used as the primary outcome measure for clinical trials in CPPS conducted by the CPCRN.

The purpose of this article is to describe the CPC study and to reproduce the baseline analysis of the cohort study recently published in the *Journal of Urology*, which is summarized here with permission.

METHODS

Patient accrual for the CPC Study began on October 16, 1998. All 488 patients who had been successfully screened and enrolled into the CPC cohort before closing recruitment on August 22, 2001, were selected for this statistical analysis. The NIH-CPSI, including subscores, was used to measure symptoms. A comprehensive history, physical examination, and demographic profile were obtained from each participant. Generalized Mantel-Haenszel procedures were used to investigate baseline associations between selected factors and symptoms.

RESULTS

CP/CPPS is a chronic syndrome, affecting men over a wide age range. Most CPC Study participants are white, well educated, and affluent. However, lower education, lower income, and unemployment were associated with more severe CPPS symptoms. Patients most frequently reported pain in the perineum and tenderness in the prostate. The most common self-reported diseases were genitourinary (55%), allergic (53%), neurologic (40%), and hematopoietic, either lymphatic or infectious (40%). CP/CPPS has a significant negative impact on both mental and physical domains of quality of life. Nearly all (95%) patients reported antimicrobial drug use. Among these 488 participants, 280 (57%) reported having used, or were currently using, ≥5 categories of prostatitis-related treatments.

Among all participants, 50% had urethral leukocytes; among 397 with EPS samples, 194 (49%) and 122 (31%) had white blood cell counts of ≥5 (5+) or ≥10 (10+) in EPS, respectively. The prevalence of category IIIA ranged from 54% to 90%, depending on the composite set of cut points. None of the CPSI measures were statistically different ($P > 0.10$) for selected leukocytosis subgroups. Based on prostate and semen cultures, 37 of 488 men (8%) had ≥1 localizing uropathogen. None of the CPSI measures were statistically different ($P > 0.10$) for selected bacterial culture subgroups.

CONCLUSION

CP/CPPS is a multifactorial problem affecting men of all ages and demographics. Patients with CPPS have a dismal quality of life, and many have benefited only minimally from empiric, goal-directed therapy. Long-term follow-up study of this CPPS cohort will answer important questions about the natural and treated history of this syndrome.

Although men with CP routinely receive anti-inflammatory and antimicrobial therapy, we found that leukocyte and bacterial counts, as we defined them, do not correlate with severity of symptoms. These findings suggest that factors other than leukocytes and bacteria also contribute to symptoms associated with CPPS.

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DISCUSSION FOLLOWING DR. SCHAEFFER'S PRESENTATION

Mark S. Litwin, MD, MPH (Los Angeles, California): If the number of white cells is not as clinically relevant as previously believed, why, then, does it make sense for us to continue to stratify patients with or without a large number of white cells?

Anthony J. Schaeffer, MD (Chicago, Illinois): We are finding that there is not a large difference, statistically, in the different populations of patients. But on an individual basis, if a patient who is complaining of pelvic pain has a large number