



“PREVALENCE OF SEXUAL DISORDERS IN PATIENTS WITH CHRONIC NON-BACTERIAL PROSTATITIS”

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ABSTRACT

Purpose: This study aims to estimate the prevalence of sexual disorders in men with chronic non-bacterial prostatitis. **Methods:** The study was conducted as a prospective cohort clinical study for estimation of prevalence of sexual dysfunction and premature ejaculation in patients with chronic nonbacterial prostatitis. The study included 50 male patients with chronic nonbacterial prostatitis (CP/CPPS IIIA or B) based on the EPS culture, urine culture and no history of previous positive culture for bacterial prostatitis. The study was conducted from July 2020 to May 2022 at Kasr Alainy Cairo University Hospital. The study protocol was reviewed and approved by our institutional review board. **Results:** The study included 50 patients with mean age 33.56 ± 9.02 years. The mean duration of symptoms is 17.5 ± 9.11 months. History was taken to specify the symptoms, its degree and impact on daily activity and exclude any pathology. (UPOINTS) questionnaire was used to categorize the patient symptoms according to dominant domains. International index of erectile function (IIEF) was used for assessment of sexual dysfunction which is commonly associated with chronic prostatitis. All patients (50) have positive psychological domain mainly catastrophic thinking of symptoms but only 14 patients (26%) have clinical depression or poor social interaction while 8 patients (15%) have poor coping or maladaptive behavior. None of the patients have clinical evidence of acute or chronic bacterial prostatitis (positive EPS culture) and no one documented successful response to antimicrobial therapy. Regarding sexual dysfunction, 38 patients (75%) of the total number have variable degrees of erectile dysfunction (ED) according to IIEF with 14 patients have mild ED, 21 patients have mild to moderate ED and only 3 patients have moderate ED. On the other hand, asking about premature ejaculation; 39 patients (83%) have associated premature ejaculation. **Conclusion:** This single centre study revealed that the prevalence of sexual dysfunction in men with CP/CPPS is high to some extent. This finding reveals that adding a sexual domain to the UPOINT typing system may be warranted. Considering the limitations related to the small sample size, more prospective studies are needed to evaluate sexual dysfunction improvement with better management of CP/CPPS.

Keywords: Chronic non-bacterial prostatitis, Prevalence, Sexual disorders, Erectile dysfunction, Premature ejaculation

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INTRODUCTION:

Chronic prostatitis has a profound effect on the quality of life of affected men similar to the impact of unstable angina and a myocardial infarction. The National Institutes for Health (NIH) devised a classification including: acute bacterial prostatitis (ABP), chronic bacterial prostatitis

(CBP), chronic prostatitis/chronic pelvic pain syndrome (CP/CPPS) and asymptomatic inflammatory prostatitis (AIP) [1,2].

Sexual dysfunction is one of the distressing health problems that affect men with chronic prostatitis. The impact of sexual dysfunction on the quality of life of male patients has been well

established, and improving sexual dysfunction might help attenuate CP/CPPS symptoms. The relationship between CP/CPPS and sexual dysfunction has often been overlooked [5]. Compared with the general population, men with CP/CPPS appear more likely to experience sexual dysfunction including erectile dysfunction, premature ejaculation, painful ejaculation and decreased sexual desire [6, 7]. However, a wide range of prevalence estimates for sexual dysfunction has been documented in a multitude of independent studies [8].

The reported prevalence of sexual dysfunction varied considerably mainly due to the definitions and methodologies in sexual function studies. Moreover, the development of sexual dysfunction in patients with CP/CPPS is positively linked with the duration of the disease [9, 10]. Estimating the prevalence of sexual dysfunction in men with CP/CPPS would help to better understand morbidity. Therefore, this study was aimed to estimate the prevalence of sexual dysfunction in men with chronic non-bacterial prostatitis and its impact on quality of life of patients.

PATIENTS AND METHODS:

The study was conducted as a prospective cohort clinical study for estimation of prevalence of sexual dysfunction in patients with chronic non-bacterial prostatitis. The study included 50 male patients with chronic non-bacterial prostatitis (CP/CPPS IIIA or B) based on the EPS culture, urine culture and no history of previous positive culture for bacterial prostatitis. The study was conducted from July 2020 to May 2022 at Kasr Alainy Cairo University Hospital. The study protocol was reviewed and approved by our institutional review board.

STATISTICAL ANALYSIS:

The summary statistic for each individual study was the prevalence proportion and was calculated as the rate of the number of men with sexual dysfunction to the sample size of the studied population. The prevalence and its standard errors were calculated using a standard formula, and then pooled effect size with its corresponding 95 % confidence interval (CI). Heterogeneity across studies was determined by I^2 statistic (significance level of $I^2 > 50\%$) and Cochran's Q statistic ($P < 0.10$ was considered statistically significant). All statistical analyses were conducted using Stata software version 11.0 (Stata Corp LP, College Station, USA).

RESULTS:

The study included 50 patients with mean age 33.56 ± 9.02 years. The mean duration of symptoms is 17.5 ± 9.11 months. History was taken to specify the symptoms, its degree and impact on

daily activity and exclude any pathology. (UPOINTS) questionnaire was used to categorize the patient symptoms according to dominant domains. International index of erectile function (IIEF) was used for assessment of sexual dysfunction which is commonly associated with chronic prostatitis.

All patients (50) have positive psychological domain mainly catastrophic thinking of symptoms but only 14 patients (26%) have clinical depression or poor social interaction while 8 patients (15%) have poor coping or maladaptive behavior. None of the patients have clinical evidence of acute or chronic bacterial prostatitis (positive EPS culture) and no one documented successful response to antimicrobial therapy.

Regarding sexual dysfunction, 38 patients (75%) of the total number have variable degrees of erectile dysfunction (ED) according to IIEF with 14 patients have mild ED, 21 patients have mild to moderate ED and only 3 patients have moderate ED. On the other hand, asking about premature ejaculation; 39 patients (83%) have associated premature ejaculation.

DISCUSSION:

Overall prevalence of sexual dysfunction among men with CP/CPPS demonstrated that the pooled prevalence of erectile dysfunction in men with CP/CPPS increased from 27 % in 1999–2010 to 35 % in 2011–2014, suggesting that the prevalence rate of erectile dysfunction might experience an increase in recent years. The prevalence of premature ejaculation in men with CP/CPPS exhibited a slight decreasing trend, from 41 % in 1999–2010 to 39 % in 2011–2014 [6].

Data on the impact of CP/CPPS on sexual function varied across studies. Sexual dysfunction is highly prevalent in men with CP/CPPS compared with the general population. A cross-sectional study from Singapore indicated that men with CP/CPPS had the worse erectile function as measured with the IIEF assessment tool, compared with men without prostatitis [3].

Recognition of the high prevalence of sexual dysfunction in men with CP/CPPS led to the proposal of adding a sexual domain to the UPOINT system and that the UPOINT plus sexual dysfunction (UPOINTS) typing system for prostatitis may be reasonable. However, the validity of adding a sexual dysfunction domain to the UPOINT system continues to be debated. Some studies have shown that the inclusion of a sexual domain to the UPOINT system improved its correlation with symptom severity [6,14] or the quality of life of patients [9], while other studies have indicated that adding a sexual domain did not appear to add value [6]. These conflicting results might be explained by the diverse ethnic and cultural backgrounds of the studied populations.

Our study specifically demonstrates that the prevalence of sexual dysfunction among men with chronic non-bacterial prostatitis was up to 75 % while the prevalence of delayed ejaculation was 83%. On the other hand in a meta-analysis study on prevalence of sexual dysfunction in patients with chronic prostatitis (including bacterial and non-bacterial types) it was 62% and premature ejaculation was 40% [6]. This finding highlights the importance of assessing the sexual domain in men with CP/CPSPS.

Delaying ejaculation, sexual abstinence and coitus interrupts are all risk factors for CP/CPSPS [10]. Therefore, adding a sexual domain to the UPOINT system may develop a UPOINT typing system that could help to differentiate more homogenous UPOINT subgroups and guide individualized therapy.

The underlying mechanisms of CP/CPSPS-associated sexual dysfunction remain unclear. Vasculogenic, endocrine and neurogenic factors, as well as psychological factors, may play an important role in the pathogenesis of sexual dysfunction in CP/CPSPS. Patients with CP/CPSPS are more likely to have nitric oxide-mediated vascular endothelial dysfunction compared to asymptomatic controls, which contribute to sexual dysfunction in these populations [13]. A link between sexual function and chronic prostatitis might be a psychological factor [11,12]. Sexual dysfunction due to psychological causes in patients with CP/CPSPS was high, and men with CP/CPSPS experienced more depression and impaired sexual function [15].

CONCLUSION:

This single centre study revealed that the prevalence of sexual dysfunction in men with CP/CPSPS is high to some extent. This finding reveals that adding a sexual domain to the UPOINT typing system may be warranted. Considering the limitations related to the small sample size, more prospective studies are needed to evaluate sexual dysfunction improvement with better management of CP/CPSPS.

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