Inflammation and infection

Chronic prostatitis developing due to candida infection: A case diagnosed 20 years later and review of up-to-date literature

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Introduction

Chronic prostatitis is a disease which adversely affects the quality of life of patients and does not respond adequately to treatments.

In this case, we will present an immunocompetent patient who had chronic prostatitis due to candida infection and who did not benefit from treatments and was not diagnosed for a long time in the light of the up-to-date literature.

The case

Our patient was 51 years old and had lower urinary tract symptoms for 20 years. He was admitted to our clinic due to frequent urination, perineal and suprapubic pain, weak urine stream, and white particles in urine. The patient's IPSS 20; the pain score 15, urinary symptom score 8, life quality index 9 according to the NIH-CPSI. He had no history of comorbidity and operation. Rectal examination was benign and pelvic floor spasm detected. In biochemical analysis, urea 21.4 mg/dl, creatinine 1 mg/dl, and PSA 1.12 ng/ml. In urine analysis, 7 erythrocytes and 2 leukocytes were detected, and nitrite was negative. Urine cultures taken before and after prostate massage were sterile. In uroflowmetry analysis, Qmax 14 ml/s, volume 539 cc, and average flow rate 8 ml/s. The patient underwent endoscopy. The anterior urethra was normal, and the prostate was mildly hyperplastic; there was cloudy urine with dense white particles in the bladder; and there was no mass in the bladder. Cytology revealed uniform bladder epithelial cells. Spore-bearing structures on the ground were seen in smear slides. They were considered as Candida glabrata (see Fig. 1). The patient began treatment with fluconazole 400 mg/day and doxazosin 4 mg/day. At the end of the first month, white particles in urine were significantly decreased, the patient's IPSS score 12; the pain score 6, urinary symptom score 2 and life quality index 3 according to NIH-CPSI, and the symptoms were regressed in an obvious manner. In urine analysis, 48 erythrocytes and 9 leukocytes were detected. Urine culture was negative. In uroflowmetry analysis, Qmax 16 ml/s, volume 370 cc, and average flow rate 12 ml/s, and the doxazosin was stopped. At the end of the second month, white particles in urine disappeared completely. Fluconazole 400 mg/day was administered for a total of 8 weeks and then was discontinued. The patient was followed-up for 6 months and no recurrence was observed.

Discussion

The National Institute of Health has divided prostatitis into four main groups: acute bacterial prostatitis, chronic bacterial prostatitis (CBP), chronic prostatitis/chronic pelvic pain syndrome (CP/CPPS), and asymptomatic inflammatory prostatitis. According to this classification, the prevalence of chronic prostatitis ranges between 1.8% and 8.2%. Although CP is characterized by pelvic pain and urinary symptoms lasting more than three months and presence of infection source. We used the Modified Meares-Stamey test (2-glass test) in our patient and we found that the urinary system infection was not bacteria-oriented. Urologists have difficulties in making the diagnosis and giving medical treatment in this group. Our patient had many previous admissions to urology clinics for 20 years due to pelvic pain, lower urinary tract symptoms, and white particles in urine. He was followed and treated with benign prostatic hyperplasia and CBP. During this period,
inability to diagnose CP associated with candida infection indicates that the syndrome should be understood more in urology practice.

Since traditional therapies have failed in clinical practice in patients with chronic prostatitis, new approaches have gradually increased in recent times. A 6-point clinical phenotyping classification system [UPOINT] has begun to take its place in urology practice. We have shaped our approach by paying attention to this. Also we used methods such as cystoscopy and cytology.

Fungal prostatitis is seen especially in the elderly, hospitalized, catheterized, and immunosuppressed patients. In the last two decades, the frequency of non-albicans Candida species has increased steadily. Although it is thought that CP caused by fungal infection can be encountered in this group, our patient was in the rare group. We detected C. glabrata, which is difficult to grow in urine culture, by lack of microscopic observation of hypha formation and by seeing spore-bearing structures in cytology. The number of publications on this subject in the literature is insufficient, and mycotic factors should be considered especially in patients with CP who do not benefit from medical treatment.

Chronic prostatitis is mostly difficult to treat. Nickel et al. conducted a study on 100 patients and reported that only one-third of them benefited from the treatment. As the first step in the treatment of chronic prostatitis, although fluoroquinolone treatment is used for 4–6 weeks, it is influential only in half of the patients whose symptoms start newly. In the second step, anti-inflammatory agents and alpha blockers are used; however, mostly the patients who have not used alpha blockers before benefit from this treatment. In the third step, 5 alpha reductase inhibitors, glycosaminoglycans are used and surgery is suggested for patients who are more resistant. In some studies, it has been suggested multimodal treatments. Candida glabrata species are systematically treated with amphotericin B or fluconazole when they cause symptomatic urinary tract infection. Our patient began treatment with fluconazole 400 mg/day and doxazosin 4 mg/day. At the end of the first month, white particles in urine were significantly decreased, and lower urinary tract symptoms regressed. We determined that our patient was cured 6 months after the end of treatment.

Conclusion

Our case has shown that fungal agents should be considered especially in patients who do not respond to medical treatment. There are very few publications on this subject in the literature. We think that the fact that the diagnosis of CP caused by C. glabrata which is rarely seen could not be made during years and thus the patient could not receive adequate treatment is valuable in terms of contributing to the literature as a case study.

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