



Case Report

Role of Helicobacter pylori in causing repeated Reinfection from Oral cavity in Chronic Prostatitis

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Abstract

Introduction: The refractoriness in treatment of chronic prostatitis (CP) could be due to repeated infection. This reinfection could be caused by Helicobacter Pylori present in human saliva.

Methods: The oral cavities seem to be the important reservoirs for the reinfection. The transmission from these reservoirs could be stopped by avoiding contact between male urethra and saliva.

Results: Three patients suffering from refractory symptoms of CP were advised to avoid contact between their urethra and saliva and were prescribed antibiotics. All patients had complete response.

Conclusions: The oral cavity serve as reservoir of microorganisms (H.Pylori) which infects patient's urethra repeatedly in patients of CP.

Introduction

Chronic prostatitis (CP) and chronic pelvic pain syndrome (CPPP) are quite common with prevalence of 8.2% (2.2 to 9.7%) [1]. Apart from poor understanding of the disease process, CPPP is notorious for its difficult treatment[2]. The latest management of CPPP, UPOINTs [Urinary, psychosocial, organ specific (prostate tenderness), neurologic, tenderness, sexual dysfunction] emphasizes treatment on several fronts [2-4]. In spite of such extensive multi-modality treatment regimens, the satisfactory treatment of CPPP still eludes us. The refractoriness of CP to treatment could be due to repeated infection. This reinfection could be caused by Helicobacter Pylori present in human saliva [5-7]. If the male urethra saliva contact is avoided (MUSCA), then the repeated infection could be prevented. This could perhaps eliminate the refractoriness of CP to the standard treatment.

Methods

To prevent reinfection from the oral cavity, the patients with refractory symptoms of CP were advised to follow MUSCA (male urethra saliva contact avoided) and were prescribed a single course of antibiotics (Ciprofloxacin-500 mg and Doxycycline-100 twice a day for 15 days]. The antibiotics were given to both the patient and his female partner. The approval from the Ethics Committee of the hospital was taken.

Case Series

The three patients suffering from CPPP/CP were treated with BASIC regimen. The ethical committee approval was taken before starting the treatment.

Case 1

A 45-year old man presented with modest perineal discomfort, post-ejaculatory

pain and dysuria for 6 months. The episodes of painful urination were more after unprotected sex with his female partner and masturbation. He took antibiotics three times after which the symptoms resolved partially but recurred back after few days. On digital rectal examination (DRE), the prostate was felt to be normal. Laboratory and radiological tests including PSA, two-glass urine test and ultrasonography were normal.

Case 2

A 37 year old man presented with perineal discomfort, rectal pain, dysuria and testicular pain for two years. There was no hesitancy or weak stream. He reported usage of saliva for lubrication during sexual intercourse and unprotected sex with his female partner. He had taken seven courses of antibiotics over the last two years with only partial relief. The symptoms got flared at regular intervals. On DRE, the prostate was little enlarged and mildly tender. Laboratory and radiological tests including PSA, two-glass urine test and ultrasonography were normal. Post-prostatic massage urine showed few leucocytes but urine culture was sterile.

Case 3

A 41 year old man presented with moderate-severe perineal discomfort, hesitancy associated with slow stream and pelvic pain for two years. He also reported associated weakness and sadness of mood. He had taken several courses of antibiotics and anxiolytics over the last two years with only partial relief. The DRE as well as the other investigations (laboratory and radiological) were normal.

All these three patients improved completely on this regimen and were asymptomatic at one year of follow-up.

Discussion

UPOINTS [Urinary, psychosocial, organ specific (prostate tenderness), neurologic, tenderness, sexual dysfunction] is the standard recommended treatment for CP. This treatment emphasizes treatment on several fronts [2-4]. However, most points of the UPOINTS regimen are perhaps treating the consequences and complications of the chronic disease process rather than the primary cause of the ailment. In six out of seven points of UPOINTS [Urinary, psychosocial, organ specific (prostate tenderness), neurologic, tenderness, sexual dysfunction], the treatment mainly targets the consequences of the disease. The primary cause of the disease is infection due to which the mainstay of the management are antibiotics [2]. The latter are usually required to be given for prolonged periods (up to 12 weeks as antibiotics for 6 weeks are not effective) and several patients require repeat course of antibiotics after few weeks [2]. This refractoriness is usually attributed to resistance of microorganisms to antibiotics [2,8].

However, it seems that an important point is being missed. Reinfection, rather than resistance to antibiotics, seems to be an important reason responsible for persistence of symptoms in CP. The patients of CP usually respond to antibiotics and have recurrence of symptoms after some time. This points towards reinfection because in case of antibiotic resistance, the resolution of symptoms won't happen at all. To prevent reinfection, it is important to identify the source (reservoir) from which infection is transmitted to male urethra (and the prostate). Then the transmission of infection from this reservoir to male urethra needs to be blocked. Once this is ensured, then even a single course of antibiotics would be able to treat CP effectively.

The reservoir causing repeated infection in patients of CP seems to be the oral cavity. Oral cavities of the patient and her female partner serve as reservoirs of infection from which the infection is repeatedly transmitted to the male urethra and the prostate. This infection in the oral cavities can repeatedly infect male urethra

by several mechanisms. Saliva (from patient or female partner) used for lubrication during intercourse or masturbation by the patient could pass infection to male urethra and prostate. Similarly, during oral sex, saliva from female partner with 'infected' oral cavity would reinfect patient's urethra.

MUSCA (male urethra saliva contact avoided) can be implemented or followed by avoiding oral sex and by avoiding usage of saliva for lubrication during sex/masturbation. Once MUSCA is followed, then the possibility of reinfection becomes quite low. Then, even a single course of antibiotics is effective in treating chronic prostatitis.

The evidence in favor of the above concept was demonstrated in a recent study in which the same pathogens were detected in the oral cavity as well as the prostatic fluid of men with chronic prostatitis [9]. Presence of periodontal disease significantly increased the inflammation of prostate in patients suffering from CP [10]. It has also been shown that improving the dental hygiene and periodontal treatment significantly decreased the symptoms in chronic prostatitis [11]. The culprit could be Helicobacter pylori (H.Pylori). Oral cavity has been shown to be a reservoir of H. Pylori [7] and H.Pylori has been found in the oral cavity of upto 60% of young adults of both sexes [5]. The levels of antibodies to H.Pylori (both IgA and IgG) have been shown to be significantly higher in the patients of chronic prostatitis as compared to normal individuals [12,13]. Thus there is sufficient evidence to point that H.Pylori could be one of the main culprits which could be responsible for refractoriness of the disease in CP.

Thus by following MUSCA (male urethra saliva contact avoided), repeated infection from an important reservoir (oral cavity) could be prevented and chronic prostatitis could be easily treated by a single course of antibiotics. This seems to be a novel and logical treatment and provide a simple solution to the complex and refractory disease. Long term randomized controlled studies are needed to substantiate the benefit of this regimen.

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