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Gardnerella vaginalis prostatitis and its treatment: A case report

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ABSTRACT

Gardnerella vaginalis is a rare cause of symptomatic urethritis and prostatitis in sexually active men. There are limited cases in the literature and few treatment recommendations. Treatment with metronidazole or clindamycin of both sexual partners may provide resolution of symptoms in these men.

1. Introduction

Gardnerella vaginalis is a bacterium known as the cause of bacterial vaginosis.[1] Some consider *Gardnerella* to be a sexually transmitted disease with male partners as asymptomatic carriers.[2] It can be a genitourinary pathogen in men and present symptomatically in rare cases of balanoposthitis, urethritis, cystitis, and prostatitis.[1–3] The prevalence of *Gardnerella vaginalis* as a pathogen in the male urogenital tract is not completely understood.[4,5]

In this case report, we discuss a male diagnosed with prostatitis due to *Gardnerella vaginalis*, as well as the treatment that completely resolved his symptoms.

2. Case presentation

A 43-year-old male presented with three weeks of dysuria and frequency of urination. He denied any urethral discharge, and his exam was normal. Initial urinalysis was negative for hematuria and pyuria. He was originally given a course of sulfamethoxazole-trimethoprim and anti-inflammatories for acute prostatitis. At follow up, his symptoms persisted, and a post-prostatic massage urine was collected and cultured. This revealed 10,000–49,000 CFU/mL of *Gardnerella vaginalis*. He was prescribed a 10-day course of metronidazole and reported a complete resolution of his symptoms.

A few weeks later he had a recurrence of symptoms following intercourse. He was given a course of clindamycin and the suggestion was made that his wife should also be treated for *Gardnerella*. Due to her asymptomatic status, she was not initially treated by her physician. The patient continued to have recurrence of symptoms following intercourse with his wife despite treatment. When both the patient and his wife were treated for *Gardnerella* with a course of clindamycin, there was a complete resolution of symptoms and no recurrence with intercourse.

3. Discussion

The presence of *Gardnerella vaginalis* in the male genitourinary tract is common. The literature suggests that 7.2–11.4% of men would have positive cultures for *Gardnerella,* most presenting asymptomatically.[1,2] Its role in causing symptomatic infection in men is questionable, thus it is often thought not to be clinically significant.[1,4] The nature of the male urethra and prostate is an inhospitable environment for *Gardnerella*.[1] The high levels of zinc in the prostatic fluid and the characteristics of the cells lining the prostate and male urethra make adherence difficult for *Gardnerella*.[1] Male partners of females with bacterial vaginosis uniformly test positive.[1,2] Urine cultures in both males and females with urinary tract infections after urologic procedures or catheters placed for more than 6 h have been positive for *Gardnerella*. There have been limited cases in which *Gardnerella* seems to be the infectious agent in symptomatic male genitourinary infections, such as balanoposthitis, urethritis, and one case of cystitis.[2] Most of the reported cases document a "fishy odor" urethral discharge, dysuria, urinary frequency, and hematuria.[2] Consideration that the male urogenital tract is not an ideal environment for *Gardnerella* suggests that symptomatic presentation in men may occur in the setting of high microbial loads.[4]

In the case of our patient, he does not meet the expected circumstances to acquire a symptomatic *Gardnerella* urogenital infection. His wife was asymptomatic, and her physician was initially reluctant to treat her because of her lack of symptoms. He had no urethral discharge and a

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negative urinalysis. He had not undergone any prior urologic procedure including catheterization. He had a moderate load of *Gardnerella* with 10,000 to 49,000 CFU, but it is unknown if this meets *Sarier* et al.'s cut-off for a high microbial load.

Due to the limited cases of symptomatic *Gardnerella vaginalis* infections in men, there is minimal research and literature on treatment. In women, *Gardnerella* bacterial vaginosis is preferentially treated with metronidazole or clindamycin. However, in men that present with prostatitis due to *Gardnerella,* treatment must include antibiotic coverage to penetrate the prostatic tissue. Recent literature reviews suggest that symptomatic men with urethritis or prostatitis due to *Gardnerella* should be treated with metronidazole or tinidazole.[4]

For our patient, both metronidazole and clindamycin were effective at treating his symptoms. These are both recommended treatments of symptomatic *Gardnerella* bacterial vaginosis. Sustained symptom resolution with our patient occurred when both he and his partner were treated. This is in line with the idea of treating the asymptomatic male partner when the female is symptomatic with *Gardnerella* bacterial vaginosis.

4. Conclusions

Despite the rarity of *Gardnerella vaginalis* as an infectious agent of symptomatic urethritis and prostatitis in men, it is important to recognize and treat these infections appropriately. We found that treatment with metronidazole or clindamycin would lead to resolution of symptoms. We believe that treating asymptomatic sexual partners will prevent recurrence of *Gardnerella vaginitis* prostatitis.

Credit author statement

Mallory E. McCormick: conceptualization, investigation, roles/writing – original draft, writing – review and editing, visualization. Mark T. Herbert: Writing – review and editing, validation. E. Bradley Pewitt: conceptualization, writing – review and editing, validation, supervision.

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Declaration of competing interest

The authors declare no conflict of interest.

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