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Effective Management and Counseling of Patients with Recurrent Bacterial Vaginosis

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Introduction

Bacterial vaginosis (BV) affects women worldwide, including 1 in every 3 women in the United States aged 14 to 49 years (21.7 million total).[1] Recurrence of BV is common: in women treated with metronidazole 400 mg twice daily for 7 days (*n*=121) over a 12-month period, more than half had a recurrence.[2]

Recurrent BV can be a frustrating condition for both patients and providers. I often see patients with recurrent BV despite multiple treatments and visits to physicians—women who are seeking a second opinion and a solution. Here is an example of a patient with recurrent BV, my treatment approach, and how I counseled her:

DISCLAIMER
The views expressed are those of the author; it is the sole responsibility of the medical professional to determine which technique or protocol is appropriate for their patients.

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A 35-year-old woman presents to the clinic for a second opinion. Over the past year and a half, she noted a vaginal discharge with a fishy odor that recurred despite multiple treatments. Initially, her primary care doctor diagnosed BV and prescribed treatment with oral metronidazole. Her symptoms recurred after several weeks and she was given another treatment with metronidazole gel. Since then she has had 2 other episodes; the patient tried a topical treatment for Candida in addition to another treatment with metronidazole.

When her physician suggested a 6-month treatment for BV, she decided to seek a second opinion.

STEP 1: Obtain a detailed history, perform a physical examination, and confirm the diagnosis

I obtain a detailed history including sexual partners, sexual practices (eg, use of sex toys), and vaginal hygiene (eg, douching). Next, I confirm the diagnosis by conducting a physical examination to look for criteria for BV.

Bacterial vaginosis can be diagnosed clinically using Amsel's criteria, while Nugent criteria using gram staining is usually used in research settings.[3-5] To diagnose BV using Amsel's criteria, 3 of the 4 following characteristics must be present: a milky white, homogeneous discharge coating vaginal walls; clue cells on wet prep (microscopy); a pH greater than 4.5; and a positive whiff test.

STEP 2: Briefly review microbiome imbalance and signs and symptoms of BV

Common patient questions addressed in this section:
- ***What causes BV?***
- ***How do I know I have BV?***

Bacterial vaginosis is characterized by a decrease or absence of H_2O_2-producing *Lactobacillus* species, and an increase in the number and species of anaerobic bacteria.[6] However, when educating patients about the vaginal microbiome, the explanation can be simplified. It may help to explain, for example, that BV is an infection in which the bacteria usually present in the vagina (lactobacilli) are outnumbered by different types of bacteria (anaerobes). Though I let the patient know that BV is not considered a sexually transmitted infection (STI), certain sexual practices (such as not wearing condoms or sharing sex toys) can increase the risk of getting BV. I discuss common symptoms such as mildly to moderately increased vaginal discharge (eg, gray/white, thin, bubbling, adheres to vaginal mucosa) with a fishy odor,[4] though most patients with BV are asymptomatic.

STEP 3: Discuss risk of recurrence

Common patient question addressed in this section:
- ***How can I help prevent BV in the future?***

Regarding sexual activity, I ask the patient about possible risk factors, including: a new partner, multiple sexual partners, an uncircumcised partner,[7] or female partner(s). I advise the use of condoms for all patients, and for those with female partners, I caution against sharing sex toys.[8,9]

I also remind patients that douching can decrease good bacteria, thereby increasing susceptibility to infection.[10] If a patient is douching, I advise stopping.

STEP 4: Review treatments

Common patient questions addressed in this section:
- ***Can it be cured?***
- ***What happens if I don't get treated?***

Several BV treatments are currently available (**TABLE 1**).[4,11] Short-term cure rates for recommended first-line treatments range from 31% to 60%.[12-14] However, recurrence rates are greater than 50% at 6 to 12 months.[2] It is thought that a vaginal biofilm is maintained by the invading bacteria even after treatment, making eradication of BV challenging.[15]

I discuss the potential for serious consequences if BV is left untreated, such as increased risk for STIs and coinfections. There is evidence that the vaginal microbiome may play a role in mediating susceptibility to STIs such as chlamydia and HIV. In fact, there is a 2.5-fold increased risk of acquiring HIV infection among women with BV compared with those who do not have BV.[16] Leaving BV untreated can also lead to increased reproductive and obstetric risks such as preterm birth, intrauterine infections, and postpartum and postabortion endometritis.[17-19]

I prescribe a first-line course for BV: oral metronidazole or alternatives such as metronidazole gel or clindamycin cream.

Alternative options include oral tinidazole and oral or intravaginal clindamycin.

Secnidazole, a 5-nitroimidazole that can be taken orally as a single dose, has a longer half-life than metronidazole. It has shown efficacy among women with recurrent BV[20,21] and was recently approved by the US Food and Drug Administration (FDA).

For women with multiple recurrences, such as this patient, I also discuss a prolonged suppressive treatment for BV for 4 to 6 months with metronidazole gel 0.75%.[4]

Alternative suppressive regimens with more

TABLE 1 FDA-approved treatments for bacterial vaginosis

Treatment	Regimen	Duration of treatment
Metronidazole 500 mg	2X day oral	7 days
Metronidazole gel 0.75%	1X day intravaginal	5 days
Tinidazole 2 g	1X day oral	2 days
Tinidazole 1 g	1X day oral	5 days
Clindamycin 300 mg	2X day oral	7 days
Clindamycin ovules 100 mg*	1X day intravaginal	3 days
Clindamycin cream 2%	1X day intravaginal	7 days
Secnidazole 2 g	1X day oral	1 day

*Clindamycin ovules use an oleaginous base that might weaken latex or rubber products (eg, condoms, vaginal contraceptive diaphragms). Use of such products within 72 hours following treatment with clindamycin ovules is not recommended.

limited experience include oral nitroimidazole (metronidazole or tinidazole 500 mg twice daily for 7 days) followed by intravaginal boric acid 600 mg daily for 21 days and then suppressive 0.75% metronidazole gel twice weekly for 4 to 6 months.[4] Monthly oral metronidazole 2 g administered with fluconazole 150 mg has also been evaluated as suppressive therapy. I reiterate recommended hygiene and sexual practices such as avoiding douching and using condoms.

A lot of patients ask about probiotics as prevention. Several studies have investigated the ability of probiotics to prevent BV and although results are varied, the safety profile of these products appears to be acceptable. Daily consumption of the probiotics *Lactobacillus acidophilus*, *Lactobacillus rhamnosus* GR-1, or *Lactobacillus fermentum* RC-14 may be considered a preventive measure.[22] Emerging treatments such as intravaginal vitamin C may also be of interest.[23]

Conclusion

Bacterial vaginosis is the most prevalent vaginal infection worldwide and is associated with increased STIs, coinfections, and pregnancy-related complications. Recurrence rates with standard treatments such as metronidazole are high due to the lengthy dosing regimen. Referred patients and those who have experienced recurrence can be complicated to treat; however, with a step-by-step approach and effective counseling, women can have a better understanding of BV and feel empowered to reduce the risk of recurrence.

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