Management of bacterial vaginosis: Updated guidance from ACOG

Introduction

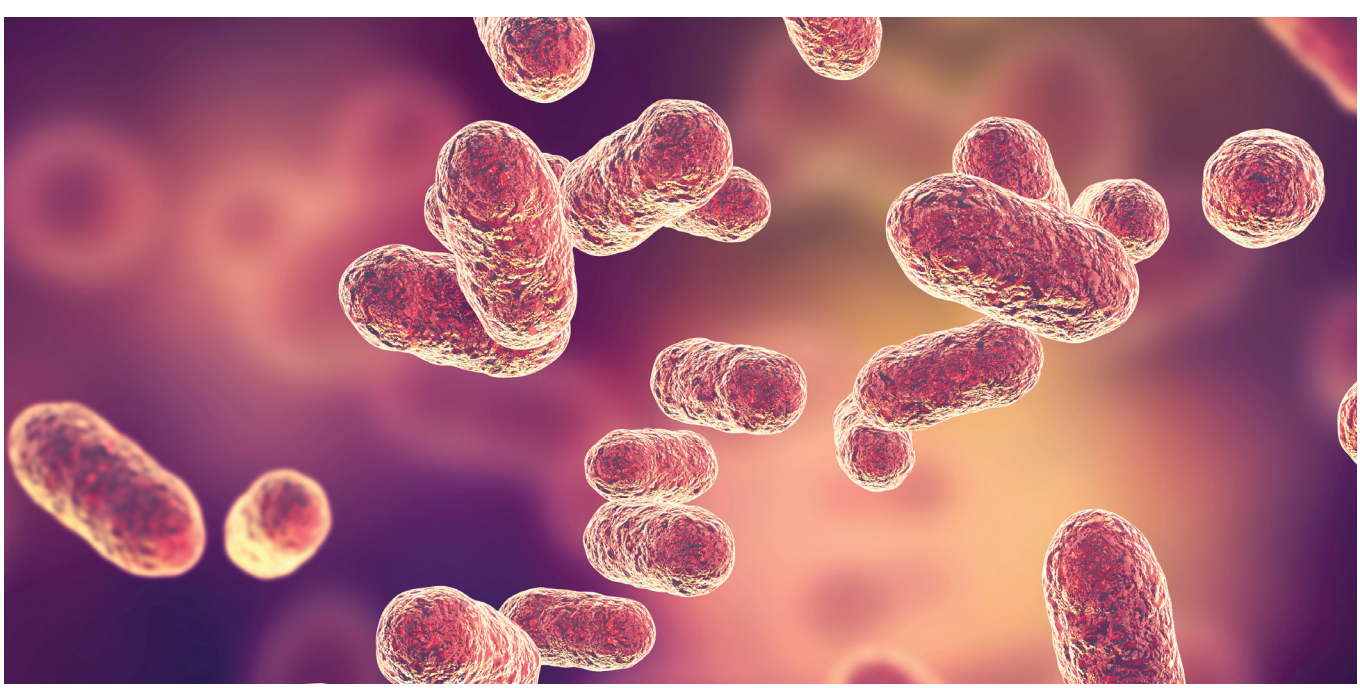
In January 2020, the American College of Obstetricians and Gynecologists (ACOG) published new guidelines on vaginitis in nonpregnant patients. These guidelines provide updated clinical guidance on the evaluation and treatment of common types of vaginitis, of which bacterial vaginosis (BV) is the most common.[1]

With an estimated worldwide prevalence ranging from 20% to 60% from country to country, BV represents an ongoing clinical challenge for healthcare providers delivering care to the many women suffering from its effects.[2] Prevalence rates also vary within countries as well as by regions within the same countries based on demographic factors such as race.[2] In the United States, the estimated prevalence is 29.2% for women age 14 to 49 years based on findings from the National Health and Nutrition Examination Survey 2001-2004.[3] Data from this same survey showed that prevalence varied by race, with higher rates for African American and Mexican American women compared to non-Hispanic white women (51% and 32% vs 23%, respectively).[4]

The burden of BV is underscored by the estimated 50% of women worldwide and 84% of women in the United States who report no symptoms.[1,5] Improving detection and diagnosis of BV is needed, particularly given the risks associated with untreated BV. These include a greater susceptibility to sexually transmitted infections (STIs), including human immunodeficiency virus, gonorrhea, chlamydia, trichomoniasis, herpes simplex virus type 2, and human papillomavirus, as well as postprocedural gynecologic infections and pelvic inflammatory disease.[1,2] Newer diagnostic tests with improved sensitivity and specificity may offer the opportunity to more accurately identify BV in women for whom standard microscopy testing has failed to capture, but this will need to be weighed against feasibility and cost.[6]

Treatment for BV also needs to be aligned with the particular needs of each patient. A number of agents now approved for BV have shown comparable efficacy, allowing healthcare providers to better tailor choice of agent based on factors other than efficacy (eg, preferred mode of administration, ease of use, contraindications, and adherence potential) for each patient.

This article focuses on the current therapies recommended to treat BV in nonpregnant women based on the updated ACOG guidelines, highlighting the importance of tailoring treatment to the needs of each patient. Also discussed is the ongoing need to consider alternative diagnostic tests to better identify all women with BV to ensure adequate treatment for symptom relief as well as to reduce the risks of comorbid infections.



ACOG updated guidelines: Treatment recommendations

The updated ACOG guidelines provide guidance on the diagnosis and treatment of the most common causes of vaginitis, including vulvovaginal candidiasis, trichomoniasis, and BV.[1] *Table 1* highlights only the recommendations for treating BV.

As shown in *Table 1*, all therapies are based on good and consistent scientific evidence and are shown to have comparable efficacy and safety. This includes the more recent US Food and Drug Administration (FDA)-approved agent secnidazole, which the guidelines point out is supported by randomized data as having an efficacy that is comparable to metronidazole and superior to placebo.[8,9]

Given the comparable efficacy and safety of all these agents, healthcare providers are encouraged to help patients choose the best one tailored to their patient's individual needs. As the guidelines state: "The choice of therapy should be individualized based on factors such as patient preference, cost, convenience, adherence, ease of use, and history of response or adverse reactions to previous treatments."[1]

Table 2 lists some considerations on which to tailor treatment. For example, does the duration of treatment matter to the patient? Does the patient prefer single dosing to multiple dosing? Does she prefer oral or intravaginal administration? Are there any restrictions accompanying a specific therapy that may be limiting or problematic for a patient and suggest a preference for an alternative therapy? Identifying answers to questions like these can help toward enhancing treatment adherence, which is critical to efficacy and outcome.

Currently, treatment is only recommended for symptomatic women per guidelines by the Centers for Disease Control and Prevention (CDC) and ACOG.[1,9] However, authors of a recently published review of BV argued for the reevaluation and modification of this guidance based on data showing that treatment of asymptomatic BV may reduce the risk of acquiring an STI.[2] They also point out that lack of treatment for women with asymptomatic BV often leads to high recurrence rates in these women.[2]

Improving diagnosis

Improving detection and diagnosis to ensure BV is correctly identified and treated is critical to help as many women as possible to ease the symptoms of the infection and reduce the risk for comorbidities. To date, screening is not recommended in asymptomatic women or in pregnant adolescents and women to prevent preterm birth.[10]

Current recommendations for diagnosis per the updated ACOG recommendations are shown in *Table 3*.

As shown, the preferred diagnostic methods are microscopy with Amsel criteria and Gram staining with Nugent scoring because these are the most cost-effective. Microscopy with Gram staining with Nugent scoring is considered the gold standard for diagnosis, but because of the skill and time needed, it is typically only used in research settings.[11] In clinical practice, most healthcare

Table 1. Updated recommendations for the treatment of bacterial vaginosis (Level A evidence*)[1]

Recommendation
• Metronidazole (oral) 500 mg twice daily for 7 days; or
• Metronidazole gel 0.75%, one full applicator (5 g) intravaginally once daily for 5 days; or
• Clindamycin 2% cream, one full applicator (5 g) intravaginally at bedtime for 7 days.
Alternative recommended treatments
• Secnidazole (oral) 2 g in a single dose; or
• Tinidazole (oral) 2 g once daily for 2 days, or 1 g once daily for 5 days; or
• Clindamycin (oral) 300 mg twice daily for 7 days or ovules 100 mg intravaginally once at bedtime for 3 days.

*Level A, based on good and consistent scientific evidence.

Table 2. Issues to consider to tailor treatment for bacterial vaginosis

Duration of treatment	Oral administration (dose per day) • One day: secnidazole (2 g in a single dose) • Two days: tinidazole (2 g once daily) • Five days: tinidazole (1 g once daily) • Seven days: clindamycin (300 mg twice daily) • Seven days: metronidazole (500 mg twice daily) Intravaginal administration • Five days: metronidazole (gel 0.75%), one full applicator once daily • Seven days: clindamycin (2% cream), one full applicator at bedtime
Ease of use	Oral or intravaginal
Restrictions	• Alcohol use – Abstaining from alcohol is recommended during treatment with select nitroimidazoles (ie, oral metronidazole and oral tinidazole), as well as 24 hours after completing treatment with oral metronidazole or 72 hours after completing treatment with oral tinidazole.* Alcohol restrictions are not indicated for secnidazole.** • Contraceptive use – Use of condoms and vaginal contraceptive diaphragm are not recommended within 72 hours after completing treatment with clindamycin ovules.***

*Based on a theoretical concern of a disulfiram–like reaction that may occur per the drug manufacturer.
**In vitro drug alcohol data show secnidazole does not interact with aldehyde dehydrogenase.
***Oleaginous base used in clindamycin ovules and cream may weaken latex or rubber products.[1]

Table 3. Updated recommendations for diagnosis of bacterial vaginosis (Level A evidence*)[1]

Recommendation
• Use Amsel clinical criteria or Gram stain with Nugent scoring
Alternative recommendations
• FDA–approved commercial tests

*Level A, based on good and consistent scientific evidence.

providers rely on microscopy with Amsel criteria because it is a relatively fast way of diagnosing BV during an office visit despite its less diagnostic accuracy. Compared with the Gram stain, the sensitivity of Amsel criteria ranges from 70% to 97% and specificity from 90% to 94%.[6,11]

Along with the risk of underdiagnosing BV in some women who have it, reliance on Amsel criteria alone may also lead to overdiagnosis in some women. Data show that some women with intermediate or mixed flora who have symptoms suggestive of BV (ie, elevated pH, clue cells, and a mild amine odor) may actually not have BV. This is shown by studies finding that 37% to 54% of

women with intermediate flora as determined by Gram staining with Nugent score were diagnosed with BV based on Amsel criteria.[11]

Given the limited diagnostic accuracy of microscopy, use of newer FDA-approved commercially available diagnostic tests may offer a needed option to improve diagnosis. Per the updated ACOG guidance, these tests may be considered when microscopy is not available.[1] These new diagnostic tests use molecular markers of BV to detect specific bacterial nucleic acids. Two main types of commercial molecular assays for diagnosing BV are available in the United States–direct DNA probe and nucleic acid amplification assays.[11] For a more through description of these tests, see **https://jcm.asm.org/content/jcm/56/9/e00342-18.full.pdf**[A].

Conclusion

Bacterial vaginosis is prevalent in women worldwide. Updated ACOG guidelines recommend a number of pharmaceuticals with comparable efficacy and safety profiles for symptomatic women. Healthcare providers are encouraged to tailor treatment to the individual needs and wishes of patients. Improving diagnosis is important to better identify all women for whom treatment is needed for symptom relief as well as reducing their increased risk of other infections. Microscopy testing using Amsel criteria and Gram staining with Nugent scoring remain the recommended tests per ACOG guidelines, but newer commercially available tests are encouraged for use when microscopy is not available.

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Web resource

A. jcm.asm.org/content/jcm/56/9/e00342-18.full.pdf

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