Bacterial vaginosis—some research issues

As mentioned earlier in this issue of *TreatmentUpdate*, bacterial vaginosis (BV) is the result of an imbalance in the bacteria that live in the vagina.

Emerging research ideas

Compared to many other conditions, research on BV seems to move at a slower pace. Despite this, there are some emerging themes in BV research. Readers should note that these ideas are preliminary and under study; as a result, the issues captured by these ideas may not yet be widely embraced by all researchers and doctors who study and care for women with BV.

The likely spread of BV

The cause and triggers of the imbalance in vaginal bacteria that is the hallmark of BV are unclear. Some research suggests that BV is sexually transmitted: The most significant risk factor for BV is sex with a new partner. Recurrent outbreaks of BV have been linked to sex with the same partner. Furthermore, women who have sex with men and who have recovered from BV are less likely to redevelop this problem if their male partner uses a condom.

Is it one germ or several?

Some researchers think that one type of bacteria—*G. vaginalis*—plays a key role in BV. Other researchers think that a group of bacteria work to enable a better environment within the vagina for themselves, and, as a result, cause BV.

Sexual networks

Some studies have found an increased risk of BV in women of African descent and white women who have sex with men of African descent. Researchers are not certain as to the reasons for this but suspect that the bacteria that cause BV are present in some sexual networks.

Treatment issues

Recommended treatments for women with symptoms of BV include the following:

- tablets of metronidazole (Flagyl) taken every day for one week
- metronidazole gel applied intravaginally for five consecutive days
- clindamycin cream applied intravaginally for seven days

These treatments generally work in 75% to 85% of cases. However, BV often recurs or relapses sometime after a course of treatment.

Researchers are not certain why relapse with BV is common but speculate that the bacteria that cause BV likely produce a thin sticky layer (the technical name for this is biofilm) that helps them adhere to the walls of the vagina. This biofilm may also provide some protection from antibiotics.

Scientists are studying the ability of several compounds to disrupt the biofilm associated with BV.

Friendly bacteria

Researchers are studying strains of harmless and friendly bacteria that live in the body. They are testing different combinations of such friendly bacteria (called probiotics) taken orally in capsules. Most clinical trials of probiotics in
women with BV have not resulted in high rates of cure or prevention. However, these disappointing results may have occurred because scientists tested what one research team has called “poorly chosen probiotic candidates.” Emerging research suggests that new formulations of probiotics, including ones containing the bacteria *L. crispatus*, may be worth exploring in well-designed clinical trials.

**Partner treatment**

As emerging research suggests that BV appears to be sexually transmitted, perhaps clinical trials where the woman’s partner is also treated may be a useful step forward. In the case of women with male partners, researchers are not certain which part of the male genital tract is the main source (or reservoir) of such bacteria. If such bacteria are only resident on the skin of the penis, then creams or gels could be used to treat the male partner. However, if the reservoir for BV-causing bacteria is inside the penis or other internal parts of the male genital tract, then the use of antibiotics taken orally may be a more fruitful application to explore.

**Outside as well as inside**

Many practices have been thought to be a trigger of BV. However, researchers have found that exposure to the following products is not clearly linked to the development of BV:

- sanitary pads
- panty liners
- sprays
- powders
- towelettes

In some studies vaginal douching has been linked to an increased risk for developing BV. Bear in mind that in most of these studies researchers have found that “women reported douching for symptoms or hygiene.” As a result, it is not clear if these women already had BV prior to douching. Also, researchers have stated that “douching is strongly linked to sexual behaviour” and this makes it difficult to know if BV results from douching or the sexual exposure that occurs after douching. Taking the totality of BV research into account, some scientists think that douching may be a co-factor for the development of BV in women, particularly those with an already somewhat abnormal bacterial balance in their vaginas.

—Sean R. Hosein

**REFERENCES:**

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