

Characteristics of HIV-Positive and HIV-Negative Bacterial Vaginosis in Women

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DESCRIPTION

The spread and acquisition of the HIV infection are linked to Bacterial Vaginosis (BV), which affects a large portion of the African population. In the rural Eastern Cape province of South Africa, the aim of this study was to ascertain the prevalence and features of BV among HIV-infected and -uninfected women. Women who had symptoms and signs of vaginal infection and were visiting Nelson Mandela Academic Hospital and Ngangelizwe Community Health Center were the subjects of a descriptive cross-sectional study (n=100). After collecting high vaginal swabs, BV was identified using Nugent's score. Regardless of HIV status, the prevalence rate of BV was 70%. 49 (80.3%) of the 61 HIV-positive patients were BV positive, compared to 12 (19.7%) who were BV negative. Of the 39 HIV-uninfected women, 21 (53.8%) and 18 (46.2%) were BV positive and BV negative, respectively (OR=3.5; CI: 1.4-8.5).

Women over 35 were significantly more likely to acquire BV. In patients with HIV, the presence of *Mobiluncus* species (>25 per high microscopic field) was substantially linked to BV. Among patients who tested negative for HIV, a recent history of antibiotic usage (3 months) was significantly linked to BV. This study demonstrates that BV is more common among HIV-positive women than HIV-negative women, and it is more common in people over the age of 35. The prevalence of *Mobiluncus* species in HIV-infected women's vaginal microbiota may be a major factor in the emergence of BV.

These results imply that BV treatment could restore normal flora, lower HIV susceptibility, and stop HIV transmission. The most prevalent genital infection in the world is Bacterial Vaginosis (BV), which has a significant incidence in the African population. It has been linked to the spread and acquisition of the Human Immunodeficiency Virus (HIV), which is a serious issue for resource-constrained Sub-Saharan Africa, which accounts for more than 70% of the world's HIV infections and accounts for 58% of all HIV-positive people. BV is a disorder that can cause patients to experience symptoms like discharge, irritation, and pain. This develops when a healthy vaginal flora is disrupted, leading to an overpopulation of the Gram-negative

anaerobic bacteria. Although the cause of BV is complex and debatable, it is frequently linked to a lack of or decline in the beneficial lactobacilli that are typically found in the vagina. By converting glycogen into lactic acid, which limits the growth of low-level bacterial species like *Mobiluncus*, *Gardnerella*, and *Bacteroides* that are prevalent in the vagina, lactobacilli regulate the vaginal acidity or pH. Hydrogen peroxide, which is hazardous to bacteria and viruses like HIV, is also produced by some *Lactobacillus* species.

The excess of bacteria such *Mycoplasma hominis*, *Gardnerella vaginalis*, *Prevotella*, *Bacteroides*, *Peptostreptococcus*, and other *Mobiluncus* species can be caused by a lack of lactobacilli. Factors that interfere with the vagina's normal acidity and the balance of the vaginal bacteria are linked to the pathogenesis of BV. Douching, Major factors thought to be involved in the pathogenesis of BV include smoking, utilizing bubble baths, having a history of STIs, and frequent sexual activity.

The Walter Sisulu University Research Ethics Committee gave the current study their seal of approval. The clinical governance of Ngangelizwe CHC and the Nelson Mandela Academic Hospital issued permissions. Participants received information about the study, were informed that participation was voluntary, and were given the reassurance that their information would be kept private by utilizing the associated study numbers. Prior to the start of the trial, participants' informed written consents were collected.

CONCLUSION

The reduction or lack of protective lactobacilli, which are typically found in the vagina, has been linked to bacterial vaginosis. BV is more common in HIV-positive women than in HIV-negative women, and it is more common in people over the age of 35. The data lends credence to the idea that BV may contribute to the spread of HIV. Some *Mobiluncus* species found in the vaginal microbiota of HIV-positive women may be crucial to the emergence of BV. These results imply that BV treatment may restore normal flora and lessen susceptibility to HIV; however, additional clinical research is required to confirm this hypothesis.

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