Bacterial Vaginosis in Clinical Literature

PREVALENCE
“Bacterial vaginosis (BV) is the most prevalent cause of vaginal symptoms among women of childbearing age.” (1)

“In previous studies bacterial vaginosis was found in 15% of women attending a gynecology clinic for college students, in 10% to 25% of pregnant women, and in 37% of women attending a sexually transmitted disease clinic.” (2)

“Most women found to have BV (84%) reported no symptoms.” (21)

“BV is an enormous public health problem, accounting for the majority of cases of vaginitis and vaginal discharge in the United States.” (3)

PREGNANCY AND SIALIDASES
“Elevated sialidase level that is measured at 12 weeks of gestation is associated strongly with early spontaneous preterm births and miscarriage...as the amount of vaginal sialidase activity increased, the likelihood of adverse outcome also increased.” (20)

“Women who have not had vaginal, oral, or anal sex can still be affected by BV (18.8%), as can pregnant women (25%) and women who have ever been pregnant (31.7%).” (21)

“Integrating a simple infection screening program into routine antenatal care leads to a significant reduction in preterm births and reduces the rate of late miscarriage in a general population of pregnant women.” (22)

“It is estimated that 15 to 20 percent of pregnant women in the United States have bacterial vaginosis.” (4)

“Bacterial vaginosis, early in pregnancy, is a strong risk factor for preterm delivery and spontaneous abortion.” (5)

“[A] potential one-half reduction of such adverse outcomes among women who are BV- positive could have an impact in reducing overall miscarriage and preterm birth rates, which were not reduced in the last decade...” (20)

“Assignment to metronidazole and erythromycin resulted in a lower rate of spontaneous preterm delivery among the 228 women with bacterial vaginosis (24.5 percent, vs. 39.7 percent with placebo; P = 0.02).....” (6)

“Treatment of bacterial vaginosis with metronidazole was effective in reducing preterm births in patients with history or prematurity in the preceding pregnancy. Compared with the placebo group patients in the metronidazole group had significantly fewer hospital admissions for preterm labor, 12 (27%) versus 28 (78%); preterm births, eight (18%) versus 16 (39%); births of infants weighing <2500 gm, six (14%) versus 12 (33%); and premature rupture of membranes, 2 (5%) versus 12 (33%).” (7)

“Integrating a simple screening and treatment program for subclinical vaginal infections into routine prenatal care early in the second trimester reduces the rate of spontaneous preterm deliveries by 50% in all weight categories. This reduction is likely to be associated with massive reductions in the direct and indirect costs associated with preterm delivery.” (8)

“Systematic clinical screening and standardized treatment of women with bacterial vaginosis were associated with a 50% reduction of both preterm birth and preterm premature rupture of membranes.” (9)

“...enormous potential for savings could be realized if early screening for bacterial vaginosis and treatment of positive women were included in routine care of pregnant women.” (10)

ASSOCIATION WITH STDs INCLUDING HIV
“... approximately 60% of women who have a sexually-transmitted disease (STD).” (23)

“The cumulative incidence of HIV at delivery was 0.6% in women with normal vaginal flora at screening and 3.6% in women with BV...” (Malawi) (11)

“...disturbance of vaginal flora is significantly associated with increased risk of HIV acquisition in both pregnant and postnatal women. During pregnancy seroconversion risk was highest in women with BV (adjusted OR = 3.7)...” (11) [OR = Odds Ratio]

“HIV-1 frequency was 14.2% among women with normal vaginal flora and 26.7% among those with severe bacterial vaginosis (p< 00001) "...the increased frequency of HIV-1 associated with abnormal flora among younger women for whom HIV-1 acquisition is likely to be recent but not among older women in whom HIV-1 is likely to have been acquired earlier, suggests that loss of lactobacilli or presence of bacterial vaginosis may increase susceptibility to HIV-1 acquisition.” (Uganda) (12)

PELVIC INFLAMMATORY DISEASE (PID) AND POSTOPERATIVE INFECTIONS
“Recently, several investigations have shown an association between bacterial vaginosis and the development of acute PID.” (13)

“...Gram stain criteria for bacterial vaginosis were significantly associated with adnexal tenderness and with a clinical diagnosis of pelvic inflammatory disease.” (2)

“Bacterial vaginosis appears to be a risk factor for the development of postoperative infections in obstetrics and gynecology.” (14)
DIAGNOSIS
"The diagnosis of BV by use of Amsel criteria is simple but relatively insensitive." (15)

“...the subjectivity and dependence on investigator skill that are inherent to the Gram’s stain analysis suggest the need for a more objective method for the diagnosis of bacterial vaginosis.” (16)

“Cultures for G.vaginalis have little utility for the diagnosis of BV. G.vaginalis can be recovered from nearly all women with BV, but also from up to 58 percent of those without BV.” (1)

“Conventional diagnostics methods such as gram staining based on Nugent scoring system are popular. However, recently, OSOM BV blue test with almost equally efficacious, less time consuming and minimal technical expertise requiring is emerged for rapid diagnosis of bacterial vaginosis.” (24)

“The availability of a rapid nonmicroscopic test that would allow accurate diagnosis of BV in diverse settings would be beneficial.” (17)

“The sensitivity and specificity of OSOM BV blue test were 97.6% and 97.5% respectively. Amsel’s criteria diagnosed 180 (44.4%) cases of BV and had a sensitivity and specificity of 67.1% and 90.6% respectively. Thus the performance of OSOM BV blue was better than the methods based on Amsel’s criteria.” (24)

“BV Blue test had excellent agreement with Gram stain which was 98.7%.” (25)

“The majority of women at the greatest risk for the sequelae of BV are not in settings where conventional diagnostic methods are either practical or possible, and they would greatly benefit from access to rapid and reliable point-of-care tests to improve the diagnosis and management of BV.” (18)

“The physician can perform BVblue at the clinic, avoiding the time delay of sending a sample to the lab. Results for BVBlue are available in 10 min versus a possible delay of days for specimen transport, analysis of the Gram stain or wet mount, and generation and receipt of results.” (19)

“The BVBlue test is able to provide a more objective and more rapid diagnosis of BV at the bedside compared to conventional diagnostic methods.” (18)

“With the use of BVBlue, the patient will benefit from the quick diagnosis and prompt treatment will help prevent women from developing sequelae that can arise from a missed diagnosis.” (19)

References
22. Kiss, Herbert, Petricvic, Lubomir, and Peter Husslein; Prospective Randomized Controlled Trial of an Infection Screening Programme to Reduce the Rate of Preterm Delivery. BMJ, doi: 10.1136/doj.3869.519663. EB, August 4, 2004