Abstract: Open Access

Lack of Association between Unhealthy Vaginal pH and Bacterial Vaginosis Positive Status

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ABSTRACT

Background: Vaginal infections, sexual activity, age, and vaginal douching can cause variations in the vaginal pH. Previous studies have shown that an increase in vaginal pH may result in bacterial vaginosis (BV). This study aimed to investigate the prevalence and risk factors associated with BV and the association between BV and vaginal pH in women from Durban, South Africa.

Methods: This study was a cross-sectional study and involved the diagnosis of BV in pregnant and non-pregnant women. BV was diagnosed using Nugent scoring and vaginal pH was reading using the Lovibond® pH strip. The reading on the pH strip was compared to the diagnosis of BV by Nugent scoring. All analyses were conducted with 95% confidence intervals and a significance level of 0.05. All analyses were conducted in STATA 17.1.

Results: Of the 150 women included in this study, 44/150 (29.33%) were diagnosed as BV positive. Similarly, 44/150 (29.33%) women were diagnosed as BV intermediate. In the univariate analysis, being BV intermediate increased the odds of vaginal dysbiosis by 2.4 times (OR: 2.42, 95% CI: 1.07-5.45) and this was statistically significant, $p=0.033$. After performing further adjustments, being BV intermediate was still associated with vaginal dysbiosis, in that being diagnosed as BV intermediate increased the odds of developing vaginal dysbiosis by 2.66 times (OR: 2.66, 95% CI: 1.06-6.64) and this association was significant, $p=0.036$. There was no significant association between vaginal pH and the prevalence of BV-associated microorganisms, $p>0.05$.

Conclusion: The high percentage of women with an intermediate BV status warrants the need for routine screening and management for BV to reduce the burden of this dysbiosis on the women's sexual health. In this study, vaginal pH was not associated with positive BV, therefore it is poor predictor for BV.

Keywords: Vaginal pH, pH strip, Nugent scoring

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