BACTERIAL VAGINOSIS AND HIGH-RISK HUMAN PAPILLOMAVIRUS COINFECTION AMONG AFRICAN AMERICAN WOMEN IN THE UNITED STATES

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Background While the etiology of bacterial vaginosis (BV) is still not known, it is described as a polymicrobial condition that lacks lactic-acid producing Lactobacillus species with an overgrowth of anaerobic bacteria and elevated vaginal pH. This study aims to evaluate the relationship between BV assessed by Nugent scoring of vaginal Gram stain and Trichomonas vaginalis infection among African American young women in the U.S.

Methods Stored vaginal swabs from a previously completed clinical trial were acquired for this study. The kinds of bacteria present in the samples were identified by classifying 16S rRNA gene sequences using high-throughput pyrosequencing. Vaginal smears were also categorized by the Nugent Gram stain score (0–3, normal; 4–6, intermediate state; 7–10, BV). TV genotyping was performed using quantitative polymerase chain reaction, performed using TaqMan probes in a customized plate (Thermo Fisher Scientific; Waltham, Massachusetts). BV was classified using Nugent Scores of Gram stain.

Results Eighty reproductive age African American (AA) women were included in the analysis. The point prevalence of HrHPV was 48.1% (95% CI: 37–59%). The mean age of the participants was 21.4 years (SD: 2.11), 81.2% graduated high school. Prior antibiotic use was low (3.8%), and 75% were not treated for BV during their lifetime. Among those who had been treated previously for BV, most were treated ≥ five times (60%). According to Nugent Scores, 70% had BV, 13.7% had intermediate flora and 16.3% were healthy. Among HrHPV positive women, 66.7% were infected with single HrHPV genotype, 33.3% with multiple HrHPV genotypes. Concurrent HrHPV and BV infection was found among 33.3% of the sample. However, there was no significant difference between the prevalence of HrHPV among women with and without BV.

Conclusion Co-occurrence of HrHPV and BV among this group of young African American women was relatively high. Considering that these conditions are very common among women worldwide, further research in this field is imperative. More studies are needed to accurately evaluate temporal sequence of acquisition of both conditions in any attempt to establish a causal relationship.

Disclosure No significant relationships.