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

Purnima Madhivanan*, Makella Coudray, Daniel Ruiz-Perez, Brett Colbert, Karl Krupp, Hansi Kumar, Giri Narasimhan, Florida International University, Epidemiology, Miami, USA; Florida International University, Bioinformatics Research Group, Miami, USA; Florida International University, Department of Biological Sciences, College of Arts and Sciences, Miami, USA; Florida International University, Department of Health Promotion and Disease Prevention, Robert Stempel College of Public Health, Miami, USA; Florida International University, Biomolecular Sciences Institute, Miami, USA

Background: Bacterial vaginosis (BV) increases the risk of many sexually transmitted infections. The co-occurrence of persistent high-risk HPV (HR-HPV) increases the risk of developing cervical cancer. This study aims to investigate the co-occurrence of HR-HPV and BV among young women in the U.S.

Methods: Stored vaginal swabs were acquired from a previously completed clinical trial. The kinds of bacteria present in the samples were identified by sequencing 16S rRNA gene sequences using high-throughput pyrosequencing. HPV 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 HR-HPV 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 women were treated 

Conclusion: Co-occurrence of HR-HPV and BV among 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.

OVERLAP BETWEEN AMSEL’S CRITERIA, NUGENT’S GRAM STAIN SCORE, AND VAGINAL MICROBIOTA COMMUNITY STATE TYPES

Antonio Salas, Khail Ghanem, Rebecca Brotman, Jacques Ravel, Susan Tuddenham, Johns Hopkins University School of Medicine, Baltimore, USA; University of Maryland, Institute of Genome Sciences, Baltimore, USA

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 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 sequencing 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 qualitative polymerase chain reaction, performed using TaqMan probes in a customized plate (Thermo Fisher Scientific; Waltham, Massachusetts). Descriptive statistics were conducted to determine the odds of TV infection among women with BV.

Results: This study included 80 African American reproductive age women with a mean age of 21.4 years (SD: 2.11 years). Most (81.2%) women had graduated high school. 70% (95% CI: 37–59%) had BV, 13.7% had intermediate and 16.3% had healthy vaginal flora. TV was diagnosed among 11.1% (95% CI: 4–8%) of the women. Prior antibiotic use was low (3.8%), and 75% of women had not been treated for BV during their lifetime. Among those who were previously treated for BV, 60% were treated for five or more times. Douching was reported by 49% of the sample. 55% of TV cases had concurrent BV, while 11.1% of TV cases also had intermediate vaginal flora. There were no associations with prior antibiotic use, hormonal contraception, douching, or prior treatment.

Conclusion: African American young women of reproductive age found to have abnormal vaginal flora should be screened for Trichomonas vaginalis infection.

Disclosure: No significant relationships.