

RESULTS: 322 eligible participants (≥ 1 dose of vaccine, ≥ 2 serology results ≥ 2 months post-last dose) had a mean age: 34 years (± 12.6). 18.9%, 12.7%, 8.7%, and 7.1% participants had a boosting event of ≥ 0.4 log units for HPV6, HPV18, HPV16, and HPV11, respectively. Log titre increases were median 0.75-0.98 and maximum 2.20-3.37, depending on HPV type. For HPV16 and 18, there was no significant relationship between the odds of a boosting event and intercourse since last visit, number of sexual partners since last visit, or HIV viral load suppression. There was a relationship between the number of new sexual partners (≥ 1 vs. 0) since last visit and the odds of immune boosting (for HPV16: $p=0.02$, $OR=4.51$, $95\%CI=1.25-16.38$; for HPV18: $p=0.02$, $OR=2.64$, $95\%CI: 1.17-5.96$).

CONCLUSION: Many participants experienced immune boosting events of ≥ 0.4 log titre ($>50\%$ increase in raw antibody titre). The association between an immune boosting event and having new sexual partners since the previous study visit supports natural boosting occurring as a result of sexual exposure to HPV, even in immunocompromised women.

LEARNING OBJECTIVES: describe natural boosting events in qHPV-vaccinated HIV-positive women.

19 Should women living with HIV be screened for pelvic floor disorder during a routine gynecological care visit?



C. Medina, A. Aserlind, A. Mohamed, J. H. Galli, J. Potter
University of Miami, Miami, FL

OBJECTIVES: This study assesses if women living with HIV experience symptoms related to pelvic floor disorders.

METHODS: From March to April 2019 women attending a dedicated HIV gynecological clinic were offered participation. Thirty patients were approached and 15 (50%) consented. Demographic information was collected. A questionnaire was administered to assess pelvic floor dysfunction, including lower urinary tract symptoms, bowel (evacuation and incontinence), pelvic organ prolapse symptoms, and sexual distress. Symptoms were assessed using 15 questions from two validated questionnaires, the Pelvic Floor Disability Index and Pelvic Organ Prolapse/Urinary Incontinence Sexual Questionnaire. Topic areas assessing function and distress were: lower urinary tract symptoms 5 (33.3%), bowel 5 (33.3%), sexual desire 2 (13.3%) and pelvic organ prolapse 3 (20%). Statistical analyses utilizing t-statistics, chi-squared and fisher's tests, were performed; a p-value less than 0.05 was considered statistically significant.

RESULTS: The mean (SD) age for the study population ($n=15$) was $45.5 \text{ } \bar{x} \pm 10.5$ years, 93% had at least one delivery, and 80% had more than one delivery. Most reporting pelvic floor dysfunction were either White Hispanic 38.5% or Black non-Hispanic 30.8%. There was no significant differences in mean age, marital status, education, income, pregnancy and vaginal deliveries when stratified by the distressed outcomes. Overall, 13 reported pelvic floor dysfunction: 12 (80%) reported pelvic organ prolapse, bowel distress was reported by 8 (57.1%), urinary distress was reported by 13 (86.7%), and 13 (86.7%) reported pelvic floor disorder symptoms. There was an association between urinary distress and pelvic floor prolapse distress symptoms ($p=0.029$). Significantly more women reported having distress with pelvic organ prolapse distress symptoms 80% ($p=0.002$) and lower urinary tract symptoms 86.7% ($p=0.029$). Neither pelvic organ prolapse, nor urinary distress was associated with bowel distress symptoms in this cohort.

CONCLUSION: Women living with HIV present with high rates of pelvic floor dysfunction and report symptoms related to pelvic organ

prolapse and the lower urinary tract. Since gynecologic visits in women living with HIV usually have greater emphasis on infection and cancer surveillance, conditions associated with pelvic floor dysfunction may not be routinely addressed. Our findings support routine screening for pelvic floor dysfunction and appropriate referrals.

LEARNING OBJECTIVES: Learners will be able to identify risk factors for pelvic floor dysfunction, including the prevalence of incontinence, urgency, frequency, nocturia and voiding difficulty in women living HIV, which is often underreported

20 When normal isn't normal: heterogeneity in dominant lactobacillus species among women having a nugent score of 0-3



L. A. Meyn¹, M. A. Beamer², M. Petrina², L. Cosentino², H. Avolia², M. Austin², A. DeMarco², V. Gould², S. L. Hillier^{1,2}

¹University of Pittsburgh, Department of Obstetrics, Gynecology and Reproductive Sciences, ²Magee-Womens Research Institute, Pittsburgh, PA, USA

OBJECTIVES: To describe differences in prevalence, concentration, and relative abundance of five vaginal Lactobacillus species across the spectrum of normal Nugent scores (0-3).

METHODS: This was a secondary analysis of 685 healthy, asymptomatic, non-pregnant, sexually active women, aged 18-45 years enrolled in five studies (one group B Streptococcus vaccine and four vaginal microbicide product trials) between 2003 and 2018. Vaginal swabs and a vaginal smear were obtained at enrollment prior to study product administration. Five species of Lactobacillus (*crispatus*, *vaginalis*, *jensenii*, *gasseri*, *iners*) were identified using quantitative PCR. Vaginal smears were evaluated by the Nugent criteria. Relative abundance was calculated by dividing the concentration of a single species by the total concentration of all five Lactobacillus species. Women with Nugent score 0-3 were used in this analysis ($n=414$). Chi-square for linear trend and Kruskal-Wallis tests were used to evaluate differences in prevalence, concentration (\log_{10} copies/swab), and relative abundance of the five species of lactobacilli across the spectrum of Nugent scores.

RESULTS: Of 685 women, 414 (60.4%) had Nugent score 0-3. These women predominantly self-identified as non-Hispanic white (67.4%) or non-Hispanic black (23.7%), were single (68.4%), and using hormonal contraception (70.3%). Nearly half (48.6%) of the women had a score of 0. The prevalence, concentration, and relative abundance of *L. crispatus* decreased with increasing score ($p=.03$, $<.001$, $<.001$, respectively), while the concentration and relative abundance of *L. iners* increased with Nugent score ($p<.001$). The relative abundance of *L. jensenii* increased with Nugent score ($p=.05$) and while prevalence and concentration were highest at a score of 3, this increase was not statistically significant. *L. gasseri* and *L. vaginalis* were present in low concentrations and the mean relative abundance remained at $<6\%$ and $<2\%$, respectively.

CONCLUSION: In this large subset of women with normal vaginal microbiota by Nugent score, *L. crispatus* was the predominant Lactobacillus species only among women with Nugent scores of 0-1, while *L. iners* was the most abundant species in women with scores of 2-3. While *L. jensenii* has been considered to confer vaginal health benefits, it was the most abundant species in only 18% of women across the Nugent "normal" range. *L. vaginalis*, *L. jensenii* and *L. gasseri* likely have a limited role in vaginal health.