

The presence of other bacteria in CIN or in normal cervical tissues lacked significance likely due to sample size, and additional investigation is required.

P1.21 COMPARISON OF SHIPPED VERSUS FRESHLY FROZEN SELF-COLLECTED VAGINAL SAMPLES FOR MICROBIOTA ASSESSMENT

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Introduction Studies have confirmed that self-collected and clinician-collected mid-vaginal swabs sample the same microbial diversity. Self-collected samples shipped through the mail for PCR-based STI testing has also been validated. We sought to determine if the microbiota of shipped vaginal samples are concordant with freshly frozen samples.

Methods In January-February 2016, 20 women self-collected six mid-vaginal swabs which were then stored in two different nucleic acid preservatives (3 E-swabs in 2 ml of modified C2 (MO BIO) and 3 in 2 ml of Amies/RNALater). Modified C2 was selected for ease of use in laboratory processing and DNA extraction. For each set of 3 swabs, 2 were immediately frozen (-80°C) and one was sent at room temperature to the University of Idaho in a FedEx "Clinical Pak" which was then return shipped to Baltimore. Meta-taxonomic analysis was performed by sequencing the V3-V4 regions of the 16S rRNA gene. Hierarchical clustering of vaginal microbiota was used to assign community state types (CST) to each sample. Bayesian hierarchical models were applied to perform within-women comparisons of shipped and freshly frozen samples.

Results Average duration of transit for the shipped samples was 8 days (SD: 1.60, range: 6–11). Paired comparison of CSTs between a woman's shipped and freshly frozen samples as well as between C2 and Amies/RNALater revealed no differences (100% concordance, kappa: 1.0 for both). After correction for multiple testing, no significant differences between phylotype relative and absolute abundances were detected in C2 or Amies/RNALater groups. Similarly, there were no statistically significant differences between total bacterial loads of shipped versus freshly frozen samples in C2 (p-value: 0.47) or Amies/RNALater (p-value: 0.21) samples.

Conclusion There were no differences in vaginal microbiota composition and structure between a woman's shipped and freshly frozen vaginal samples stored in Amies/RNALater or C2. These data enable future studies to allow participants to self-collect and mail vaginal microbiota specimens.

P1.22 VITAMIN D AND THE VAGINAL MICROBIOME: RESULTS FROM A BLINDED, RANDOMISED CONTROLLED TRIAL

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Introduction A blinded, randomised controlled trial (RCT) previously demonstrated no effect of vitamin D supplementation on recurrence of bacterial vaginosis (BV) diagnosed by Nugent score. Here, we examine archived samples to determine whether vitamin D supplementation affected trial participants' vaginal microbial composition.

Methods Women with symptomatic BV via Amsel criteria were recruited and treated with 500 mg of oral metronidazole at baseline. Participants were randomised to vitamin D supplementation (9 doses of 50,000 IU cholecalciferol over 24 weeks) or matching placebo. Vaginal bacterial composition was characterised for 15 women in each treatment arm, using samples collected at baseline, 4 and 24 weeks. We sequenced the V1-V3 region of the 16S rRNA gene and taxonomy was assigned by PECAN. Microbiota were clustered into 5 community state types (CSTs) using Bray-Curtis distances and hierarchical clustering with Ward linkage. We assessed serum vitamin D levels using the Liaison 25 OH vitamin D total assay.

Results We observed no significant effect of vitamin D treatment on *Lactobacillus* dominance over 24 weeks (p>0.5). Additionally, serum vitamin D levels were not associated with CST (p=0.22). Following metronidazole treatment, the *Lactobacillus iners*-dominated CST (III) was more common at week 4 compared to enrollment in both the placebo and vitamin D groups. Specifically, the relative abundance of *L. iners* was significantly higher in the placebo arm at weeks 4 (p<0.001) and 24 (p=0.04) compared to the vitamin D arm.

Conclusion In agreement with the RCT, we observed no association between vitamin D supplementation and the vaginal microbiota. While many women in both RCT groups tended toward *L. iners*-dominated microbiotas following metronidazole treatment at week 4, *L. iners* was significantly more abundant in the placebo group. Future research may examine if vitamin D plays a role in stimulating non-lactobacilli growth and how supplements, in addition to antibiotics, affect the emergence of robust lactic acid producing lactobacilli.

P1.23 ANTIBIOTIC USAGE AND COMMENSAL PHARYNGEAL NEISSERIA OF MSM IN HANOI, VIETNAM

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Introduction: *Neisseria gonorrhoea* (NG) is gaining resistance to last line cephalosporins; conferring resistance to almost all antimicrobials used to treat it since the 1930s. NG disproportionately affects men-who-have-sex-with-men (MSM) and sex workers. *Neisseria* are particularly apt at horizontal gene transmission within the genus. Genetic analysis of resistant NG found fragments from *N. cinerea* and *N. perflava*, common commensals of the oropharynx. Nearly all global cases of ceftriaxone resistant NG are reported from pharyngeal samples. Self-medication with antibiotics is prevalent in Vietnam and MSM of Hanoi have high rates of STIs.

Methods MSM from Hanoi, Vietnam were surveyed regarding health seeking behaviours, including antibiotic usage.