P367 HORMONAL CONTRACEPTION AND RISK OF STIS AND BACTERIAL VAGINOSIS IN SOUTH AFRICAN ADOLESCENTS: A RANDOMIZED TRIAL

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Background Young women in sub-Saharan Africa are at high risk for sexually transmitted infections (STIs) and often rely on hormonal contraception (HC) to prevent unwanted pregnancies. Some observational data suggest that HC might affect STI risk. We examined the impact of three HC methods on the adolescent STI incidence and BV prevalence in a randomized trial.

Methods 130 adolescent females aged 15 to 19 from Cape Town were enrolled and randomized into three study arms: 1. injectable norethisterone enanthate (NET-EN), 2. combined oral contraceptives (COCs) or 3. combined contraceptive vaginal ring (CCVR) for 16 weeks. Participants then switched to a second HC for a final four months. Vaginal samples were collected at baseline, crossover and exit for STI (chlamydia, gonorrhoea, mycoplasma and trichomoniasis) and bacterial vaginosis (BV) testing by Nugent scoring.

Results At baseline, the BV and STI prevalence was 44% and 42%, respectively. There were no significant differences in STI incidence between study arms at crossover, however in an according to protocol analyses, participants using COCs were significantly less likely to present with any STI than participants using either NET-EN (OR 0.22, 95% CI 0.06–0.71, $p=0.017$) or CCVR (OR 0.21, 95% CI 0.05–0.69, $p=0.015$). Specifically, participants on CCVR were more likely to be infected with *N. gonorrhoea* (OR 11.7, 95% CI 2.0–224, $p=0.025$). These associations stayed significant after adjusting for sexual risk behaviour, including condom use. There was a decreased prevalence of BV in the COC arm and an increased BV prevalence in the NET-EN and CCVR arms at crossover, but these differences were not statistically significant.

Conclusion Use of COCs was associated with lower BV prevalence and STI incidence compared to NET-EN and CCVR use.

Disclosure No significant relationships.

P368 LOW PREVALENCE OF VAGINAL DYSBIOSIS IN KENYAN ADOLESCENT GIRLS

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Background Vaginal dysbiosis is a risk factor for sexually transmitted infections (STI) and HIV in young women, and is highly prevalent in Africa. We sought to describe the microbiota of younger African women, before engaging in sexual behavior.

Methods Adolescent girls aged 16–21 were recruited in Thika, Kenya. Eligible participants were HIV and HSV-2 seronegative, and reported sexual naiveté or one lifetime sexual partner. Nugent score was determined from vaginal Gram stains. Girls were tested for *Neisseria gonorrhoea* (NG), *Chlamydia trachomatis* (CT), and *Trichomonas vaginalis* (TV). Chi-square testing was used to compare BV with other variables.

Results We enrolled 400 girls with a median age of 18.6 years (range 16–21). The majority (322 girls, 80.5%) reported no history of sexual intercourse, while 78 (19.5%) reported sex with 1 lifetime partner. Reported sexual partners were older, with median age of 22 years (IQR 19–25). At enrollment, 375 girls had vaginal Gram stains: 338 girls (90%) had a normal Nugent score of 0–3. BV (Nugent score ≥ 7) was uncommon (21 girls, 5.6%). Girls with BV were older (median age 19.3, IQR 17.9–20.3) than girls with Nugent score 0–3 (median age 18.6, IQR 17.6–19.3) and Nugent score 4–6 (median age 18.6, 17.9–19.8). Of 373 girls with STI testing, 49 girls were diagnosed with STIs and 7 girls had both STI and BV. BV was significantly associated with self-reported sexual intercourse: 52% of girls with Nugent score ≥ 7 reported prior sex, compared to 18% of those with Nugent score 0–3 ($p = 0.001$).

Conclusion Kenyan adolescent girls in a low-risk cohort have *Lactobacillus*-dominated vaginal microbiota, and only 5.6% of girls had evidence of BV. BV was found more often in girls who self-reported sexual intercourse. Interventions to prevent the onset of vaginal dysbiosis could be beneficial for African women.

Disclosure No significant relationships.

P369 INCIDENCE OF VAGINAL INFECTIONS IN KENYAN WOMEN RANDOMIZED TO CONTINUOUS OR CYCLIC CONTRACEPTIVE RING (CVR)

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Background Bacterial vaginosis (BV) is common in sub-Saharan African women, confers elevated risk for HIV acquisition, and is associated with menses. Antibiotic treatment provides symptomatic relief, but recurrence is common. Limited data support a favorable effect of a CVR containing estrogen and progesterone (NuvaRing) on vaginal bacteria, increasing quantities of favorable *Lactobacillus* species and reducing those of BV-associated bacteria (BVAB). We randomized women treated for BV in Thika, Kenya to continuous (menstrual suppression) vs cyclic (regular menses) use of NuvaRing, and assessed effects on BV.

Methods Women aged 18–40 years were enrolled and treated for BV defined by Amsel clinical criteria. One month later, they were randomized and evaluated monthly for 7 months. We used a logistic regression model with robust standard errors to compare BV incidence in each study arm at two