14 High prevalence of Group B Streptococcus colonization among pregnant women in amman, jordan

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OBJECTIVES: To conduct a pilot study to determine the prevalence of GBS among pregnant women in Amman, Jordan, where Group B Streptococcus (GBS) testing is not routine.

METHODS: We collected rectal/vaginal swabs from women who presented in labor at Al-Bashir Hospital, a large government-run hospital in Amman, Jordan. Three methods were used to identify GBS: Strep B Rapid Test (Creative Diagnostics), blood agar media (Remel) with confirmed with BBL Streptocard acid latex test (Becton Dickinson), and CHROMagar StrepB (Remel). Results were read by a local microbiologist. We defined gold standard for GBS+ as a positive blood agar culture confirmed by latex agglutination and positive CHROMagar. Demographic and clinical data were also collected. We present proportions for categorical variables and medians and interquartile ranges (IQR) for continuous variables.

RESULTS: In April and May 2015, 200 women were enrolled at a median age of 27 years (IQR: 23-32); 88.9% were Jordanian nationals and 71.9% completed secondary school. Median gestational age was 38 weeks (IQR: 37-40) and nearly all women reported prenatal care (median 9 visits; IQR: 8-12). Pre-pregnancy median BMI was 24.1 (IQR: 21.5-28.0) and 15.5% reported an underlying medical condition. Median gravidity was 3 pregnancies (IQR: 2-5) and parity was 2 births (IQR: 1-3). Obstetric complications included gestational hypertension (9.5%), gestational diabetes (6.0%), and UTI (53.5%), of which 84.5% reported treatment. Overall, 39 (19.5%) of women were positive for GBS on blood agar media and CHROMagar, while 67 (33.5%) were positive by rapid test (36% sensitivity, 67% specificity). No demographic or clinical differences were noted between GBS+ and GBS-negative women. Penicillin allergy was reported in 5.0%.

CONCLUSIONS: A high proportion of women presenting for labor at Al-Bashir were colonized with GBS. The rapid diagnostic was less sensitive and specific than culture. These results support expanded research in the region, including defining the GBS resistance patterns, serotyping information, and risk factors. It also emphasizes the need for improved rapid GBS diagnostics for developing world settings.

15 A post hoc analysis of secnidazole 2 g for the treatment of bacterial vaginosis: effect of 2016 FDA guidance on clinical response rates in a subpopulation of patients

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OBJECTIVES: A clinical study evaluating a single-dose, oral granule formulation of secnidazole 2 g for the treatment of bacterial vaginosis (BV) was conducted and the results have been reported. Since then, the US Food and Drug Administration (FDA) has issued updated guidelines for clinical studies evaluating treatments for BV. The purpose of this post hoc analysis was to determine the effects of the updated FDA criteria issued in 2016 on enrollment and clinical response rates.

METHODS: Women or postmenarchal girls, ≥12 years of age, with a clinical diagnosis of BV (presence of discharge, vaginal pH ≥4.7, ≥20% clue cells, and positive 10% potassium hydroxide [KOH] whiff test), were randomized 2:1 to receive a single dose of secnidazole 2 g or placebo. The primary endpoint of the original study was clinical cure, as defined by normal vaginal discharge, negative 10% KOH whiff test, and <20% clue cells at the end-of-study visit, from days 21−30. We analyzed what we considered important differences between 1998 and 2016 guidelines: exclusion of women with a Nugent score of 4−6 at enrollment, change in the description of discharge for successful clinical cure, and return visit at days 7−14 instead of days 21−30.

RESULTS: Response rates from the primary efficacy population (secnidazole group, n=107; placebo group, n=57) have been reported, 53.3% vs 19.3%, respectively (P<0.001). Within the primary population, 16.8% (n=18) of the secnidazole group and 7.0% (n=4) of the placebo group had baseline Nugent scores 4−6 and did not meet 2016 inclusion criteria. In the Nugent score 7−10 population, the clinical response rate was 64% (n=57) for the secnidazole group and 26.4% (n=14) for the placebo group, based on the assessments at days 7−14 (P<0.001), and 58.4% and 24.5%, respectively, at days 21−30 (P<0.001). The response rates at 7−14 vs 21−30 days were not significantly different (P=0.54).

CONCLUSIONS: The new definitions of clinical cure and timing of the end-of-study visit did not significantly affect response rates. Using the 2016 FDA criteria, future BV studies will need to plan on enrolling more patients with abnormal Amsel's criteria in order to meet new Nugent score criteria.

16 Does screening, treatment and prevention for infectious diseases by attending ≥4 antenatal care visits decrease the risk of stillbirth and poor birth outcomes in rural uganda?

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OBJECTIVES: Infectious causes of stillbirth, including syphilis and malaria, are prevalent in resource-limited settings. Infection screening, treatment, and prevention are pillars of antenatal care (ANC). Data are lacking on whether ANC decreases stillbirth and adverse neonatal outcomes. We hypothesized that risk of stillbirth in Uganda is significantly lower in women attending ≥4 ANC visits compared to those attending <4.

METHODS: We performed a secondary analysis of a prospective cohort of 4,231 women presenting to a regional referral hospital for delivery in 2015. Women were followed to determine in-hospital incidence of postpartum infection, and a subset of 1,785 women underwent structured interview and chart review. Data were collected on sociodemographics, medical conditions, antenatal care, and maternal and neonatal outcomes. Our primary outcome was documented stillbirth; a secondary composite poor birth outcome included early neonatal death, low birth weight (<2500g), 5-minute APGAR <7, and stillbirth. We performed bivariate analysis using Chi squared, Wilcoxon Rank Sum, and t-tests, and univariable and multivariable logistic regression analyses to identify independent correlates of stillbirth and composite poor birth outcomes, with particular focus on antenatal care and infections.

RESULTS: Of 1,785 participants, 58 (3.3%) pregnancies resulted in stillbirth and 198 (11.4%) had a poor birth outcome. In multivariable analysis controlling for age, distance from hospital, referral status, receipt of malaria prophylaxis, report of prior syphilis infection, and parity; attending ≥4 ANC visits was associated with significantly reduced odds of stillbirth (aOR 0.5, 95% CI 0.3-0.9, P=0.02). Receipt of malaria prophylaxis at ANC was also independently associated with reduced odds of stillbirth (aOR 0.05, 95% CI 0.2-1.0, P=0.04), but report of prior syphilis infection was not associated with stillbirth (aOR 1.0, 95% CI 0.2-1.5, P=0.98). In a multivariable sensitivity analysis of risk factors associated with the composite poor birth outcome, attending ≥4 ANC visits remained associated with significantly reduced odds of poor birth outcomes when accounting for multiple potential confounders (aOR 0.66, 95% CI 0.4-0.96, P=0.03).

CONCLUSIONS: For this cohort of women in rural Uganda, attending ≥4 ANC visits was associated with reduced odds of stillbirth and poor birth outcomes, which may be related to receipt of antenatal infection screening, treatment, and prevention services.

17 Prevalence of vulvovaginal discomfort in a cohort of women with inflammatory bowel disease

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OBJECTIVES: Inflammatory bowel disease (IBD) affects ~400 per 100,000 people in the United States, about half of whom are women. IBD is characterized by alterations in gut microbiota. Vulvar sequelea of IBD have been described since 1975, but the impact of IBD on vaginal health is not well described. We aimed to determine the prevalence of vulvovaginal symptoms in women with IBD as a foundation for evaluation of vaginal microbiota in these women.

METHODS: Women over 18 years old enrolled in Crohn's and Colitis Foundation of America (CCFA) Partners cohort were asked to complete a cross sectional survey on vulvovaginal symptoms. We aimed to determine prevalence and severity of vulvar or vaginal itch, burn, discharge, dryness and pain in women with IBD. CCFA Partners surveys include data on demographics and the Manitoba index of IBD severity. Bivariate comparisons between women with Crohn's disease (CD)/Indeterminate colitis (IC) and Ulcerative colitis (UC), and between women with and without symptoms were performed. Logistic regression models were used to determine associations between IBD severity and presence of vulvovaginal symptoms, adjusted for age.

RESULTS: Out of 1306 women who completed the survey, 878 (67.2%) had a diagnosis of CD/IC and 428 (32.8%) UC. There were no significant differences in ethnicity, smoking, contraceptive use or menopausal state between the two groups, but women with UC were slightly older (4214 vs. 4014 yrs, p = 0.02). A total of 466 (36%) women reported 1 moderate-severe vulvovaginal symptom in the past month. There was no difference between women with CD/IC (321/878; 37%) vs. UC (145/428;34%; p=0.6). Report of vulvar fissures was rare (8/1306, 6%). Women with constant/often active IBD had increased odds for vaginal discomfort (OR 2.01; 95% CI 1.46, 2.78), as did those with rare/sometimes active disease (OR 1.48; 95% CI 1.09, 1.99), compared to those in remission by Manitoba. For many, vulvovaginal discomfort decreased interest in (672/1229; 55%) or ability to have (595; 47%) sex.

CONCLUSIONS: Women with IBD have a high prevalence of vulvovaginal discomfort that has a significant impact on sexual health. Further, women with IBD report higher prevalence of vulvovaginal discomfort when IBD is poorly controlled. Further evaluation of vaginal health and the vaginal microbiota in women with IBD could identify areas for intervention to improve sexual and reproductive health.

18 Sexually transmitted infection screening and follow-up in a high-risk urban obstetric clinic

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OBJECTIVES: The timely diagnosis of sexually transmitted infections (STIs) in pregnancy is critical as STIs are linked to perinatal morbidity and mortality. We sought to determine the screening rate and prevalence of chlamydia (CT), gonorrhea (GC), Treponema pallidum (TP), human immunodeficiency virus (HIV) and hepatitis B virus (HBV) infections among a presumed high-risk obstetric population. We also report treatment and follow-up of patients and their partners.

METHODS: We conducted a retrospective chart review of 1000 obstetrics patients seen at a tertiary center obstetrics clinic, where standard of care is to perform universal screening for CT, GC, TP, HBV and HIV at the initial prenatal visit, with repeat TP in the 3rd trimester. 854 met criteria for inclusion in the study. Test results and clinical management information were extracted from electronic medical records. Statistical analyses were performed using SAS ver.9.2 (SAS, Cary, NC).

RESULTS: The mean age of patients was 29.2 ± 7.5 (range 14-48). Prevalence of CT, GC, GC&CT, HBV, TP and HIV were 3.7%, 0.3%, 0.4%, 0.2%, 0.1% and 1%, respectively. All patients with positive GC/CT were treated; 97% of them had a test of cure. Only 18.2% of partners were documented to have been treated. Patients tested for GC/CT were further analyzed. Patients with positive GC/CT were more likely to be <25, have a history of STI, be first time mothers and have risky sexual behavior with all statistically significant p values when compared to patients with negative GC/CT. Logistic regression analysis supports that age <25 is associated with increased risk of GC/CT (OR 4.22, CI 1.73-10.28, p=0.0015), as is any risky behavior (OR 2.82, CI 1.24-6.4, p=0.131). For syphilis, there were no new seroconversions between the first trimester and third trimester screening.

CONCLUSIONS: Our data supports the importance of universal screening among patients <25 and those with any risky sexual behavior as recommended by the CDC. In our population, 3rd trimester syphilis screening did not detect any new infections. Compared to national screening rates, this center holds very high screening rates in pregnancy but is still not optimal. To address the lack of partners' treatment, providing prescription for both patients and their partners should be encouraged.

19 Prevalence of mycoplasma genitalium in a screening population

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OBJECTIVES: Mycoplasma genitalium (MG) is an emerging sexually transmitted pathogen associated with urethritis in men and vaginitis, cervicitis, pelvic inflammatory disease, and infertility in women. The prevalence of MG was evaluated in male and female urogenital