SEXUALLY TRANSMITTED INFECTIONS AND PREGNANCY OUTCOMES, FLORIDA 2008–2010


Background A prior population based study found the odds of low birth weight for women with inadequate weight and history of Chlamydia trachomatis (CT) infection during the pregnancy was nearly twice that of women without CT infection (AOR 1.98, p < 0.02). A stronger association was observed with pre-term low birth weight (AOR 2.54, p < 0.01). Subsequently, 2005–2006 ratified state laws and regulations required Ct screening during pregnancy.

Objectives To examine associations between Ct infections during pregnancy and birth outcomes among women who gave birth in Florida after implementation of mandated Ct testing.

Methods Logistic Regression analysis of Florida birth records (548,407) linked to records for women who tested positive for Ct (12,334), were treated and gave birth from 01/01/2008 to 12/31/2010.

Results Among 18–35 years old, with singleton births, 2.7% were reported with chlamydia during pregnancy and 6.5% experienced low birth weight (LBW) outcome, less than 2500 grammes. Among controlling for smoking, prenatal care, race, education, marital status, inadequate weight gain and nine other covariates, Ct infection treatment in gestation weeks 17 through 28 was associated with increased odds of delivering a moderately LBW infant (1500 to 2499 grammes) (AOR 1.29, 95% CI 1.12 to 1.49). No association was found for very LBW infants (< 1500 grammes) or for Ct infections treated before 17 weeks gestation. The increased odds for moderately LBW were observed for preterm (< 37 weeks gestation) moderately LBW infants (AOR 1.28, 95% CI 1.07 to 1.53) and term (≥ 37 weeks gestation) moderately LBW infants (AOR 1.27, 95% CI 1.03 to 1.57).

Conclusions Proactive public health policies for chlamydia screening during pregnancy and intensified treatment timeliness may have contributed to improved pregnancy outcomes, but Ct infection continues to be associated with increased odds of moderately LBW. Prospective examination of treatment dosage and timeliness may prove informative.
Results 112 HIV-infected women were enrolled, of whom 52 non-pregnant and 60 pregnant. In this population, mean age was 32.3 years (SD = 8.2), 62.5% had a previous history of sexually transmitted diseases, 46.4% began sex life with 15 years or less, 33.1% reported having less than 3 sexual partners throughout life, 45.8% had undetectable HIV viral load. We found a prevalence of 5.4% of Chlamydia trachomatis infection in HIV-infected women followed. There was an association of CT with the presence of pregnancy (10.0% versus 0.0%; p = 0.019), HIV viral load > 10,000 copies (p < 0.001) and the mean time of HIV diagnosis (21.0 versus 69.2 months; p = 0.032). We found no association with other risk factors studied (ethnicity, marital status, education, use of alcohol and drugs, CD4+ T Lymphocyte count).

Conclusion Early access to diagnosis and treatment of infection by HIV and Chlamydia trachomatis is an important preventative action. In pregnant women infected with HIV, the prevalence of Chlamydia appears to be greater and this is a period where treatment can improve maternal and neonatal outcome.

P3.186 SUBSTANTIAL NATURAL CLEARANCE OF GENITAL AND EXTRAGENITAL CHLAMYDIA TRACHOMATIS AND NEISSERIA GONORRHOEAE IN STD CLINIC ATTENDEES
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Background Little is known on the natural history of extragenital Chlamydia trachomatis (Ct) and Neisseria gonorrhoeae (Ng). More insight in the natural history of extragenital Ct and Ng could influence standard operating procedures in screening facilities such as STD clinics. We evaluated proportions of natural clearance of Ct and Ng in genital and extragenital samples.

Methods We included self collected Ct and/or Ng positive genital (urine and cervicovaginal) and extragenital (anorectal and oropharyngeal) samples from STD clinic attendees [April 2011-December 2012]. Data on demographics and sexual behaviour were collected in an electronic patient file at initial testing. At follow-up for treatment, subjects were retested prior to treatment at the same anatomic site(s) as initial testing and provided an additional questionnaire on sexual behaviour since initial testing. Natural clearance rates of Ct and Ng were compared between anatomic sites. Data on the first 238 individuals (299 samples) are presented, enrollment is ongoing.

Results In total, 38% of the participants were male and the median age was 27 years. The median interval between initial and follow-up sample was 11 days. Natural clearance of Ct was 10.5% (22/210) for genital samples (36% urine, 64% vaginal) and 25.9% (7/27) for extragenital samples (57% anorectal, 43% oropharyngeal) (P = 0.49). For Ng this was 22.2% (2/9) for genital samples (0% urine, 100% vaginal) and 18.8% (3/16) for extragenital samples (53% anorectal, 47% oropharyngeal) (P = 0.84). Overall, natural clearance of Ct was 12.2% (29/237) and Ng was 20.0% (5/25) (P = 0.14). Age < 25 years (P < 0.01) and female sex (P = 0.03) were associated with overall Ct clearance. Median interval was not associated with Ct/Ng clearance (P = 0.13 and P = 0.11 respectively).

Discussion Natural clearance of Ct and Ng was substantial in both genital and extragenital samples. Further analysis on associated determinants as well as bacterial load determinations will provide more insight into these results.

P3.187 SEXUALLY TRANSMITTED INFECTIONS AMONG A COHORT OF HORMONAL CONTRACEPTIVE USERS IN IBADAN, NIGERIA
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Background Most women who acquire HIV and other sexually transmitted infections (STIs) are in their child bearing years and are current or potential users of contraceptive methods. The study was undertaken to provide information on the association between the hormonal contraceptive methods and STIs among women attending Family Planning clinics, University College Hospital, Ibadan, Nigeria.

Methods It was a cross-sectional study in a population of women using hormonal contraceptive methods attending Family Planning clinics. Detailed medical history, Endocervical and high vaginal swabs were collected from the women to establish diagnosis after clinical examination and informed consent. Aliquots of sera from venous blood samples of the women were tested for antibodies to HIV-1/2 and RPR. Data was analysed using SPSS for windows’ version 15.0.

Results There were 102 women using hormonal contraceptive methods who participated in the study in mean age of 31.92 years (SD = 8.33, range = 16 –55). The mean age of sexual debut of participants was 19.5 years. The most common STI diagnosed was Vaginal candidiasis (22.5%) while others were bacterial vaginosis (21.6%), HIV (11.8%), Trichomoniasis (11.8%), Chlamydia cervicitis (8.8%), syphilis (5.9%), genital warts (6.9%) and gonorrhohea (2.9%). Younger age of sexual debut influenced the decision of selecting various forms of hormonal contraceptives especially the emergence of oral contraceptive forms (P = 0.043). Majority of the women on hormonal contraceptives had multiple sexual partners. There were significant associations between utilisation of hormonal contraceptive methods and transmission of trichomoniasis (P = 0.019, 4.2 (1.0–13.2).

Conclusions Women seeking contraception to prevent unintended pregnancy are as much in need of education about prevention of STIs. The study found that younger age, numbers sexual partners, and use of hormonal contraceptives could increase the risk of acquiring trichomonads infection.

P3.188 CYTOMEGALOVIRUS AND HIV CO-INFECTION AMONG PATIENTS ACCESSING CARE IN A TERTIARY CARE CENTRE IN NIGERIA
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Background Cytomegalovirus (CMV) is one of the commonest viral opportunistic infections in persons with Acquired Immune Deficiency Syndrome (AIDS). In AIDS patients, progressive loss of immune function, and in particular, loss of cell mediated immunity, permits CMV reactivation and replication. This study aimed to evaluate the prevalence of seropositivity for CMV IgG and IgM among HIV sero-positive patients in Ilorin, Nigeria.

Methodology Sera obtained from 180 HIV sero-positive individuals and 180 HIV sero-negative blood donors participants were assayed for CMV IgG/IgM using Enzyme Linked Immunosorbent Assay (ELISA). The CD4 cell counts were also done. A semi-structured questionnaire was used to obtain information on the risk factors for CMV/HIV co-infection.

Result A total of 169(93.9%) of the HIV sero-positive were CMV IgG positive while, 174(96.7%) of the control were also CMV IgG positive. Among the HIV sero-positive, 20 (11.1%) were CMV IgM antibody positive, while 4(2.2%) of the HIV sero-negative control group were CMV IgM positive. Age of Participants (p = 0.000), number of sexual partners (p = 0.000) and CD4 cell counts (p = 0.000) were significantly related to CMV IgM sero-positivity. However the use of HAART (p = 0.777), history of blood transfusion (p = 0.837)