LEARNING OBJECTIVES: Learners will be able to identify the predominant Lactobacillus species detected by quantitative PCR in women with normal vaginal microbiota.

21 A case of chorioamnionitis, maternal sepsis, and fetal demise associated with streptococcus pseudoporcinus

S. Pierce, D. Shibib, D. Robison, R. Edwards
University of Oklahoma Health Sciences Center, Oklahoma City, OK

OBJECTIVES: Streptococcus pseudoporcinus has biochemical characteristics similar to Streptococcus agalactiae and has recently been found to colonize the female genital tract. It has been reported in association with clinical infections but has not previously been shown to be a cause of serious perinatal morbidity or mortality. Here we present a case of severe maternal morbidity (sepsis) and fetal demise associated with Streptococcus pseudoporcinus.

METHODS: Case report.

RESULTS: Case: A 41-year-old gravida 2, para 1001 presented with abdominal pain and fetal demise at 34 weeks gestational age. She was found to be in labor, with tachycardia and leakage of purulent fluid from the cervical os. Her maximum temperature was 37.5 degrees Celsius, and labs were significant for a white blood cell count of 29,000 per mL and a serum lactate of 2.4 mmol/L. Intravenous ampicillin and gentamicin were initiated in Labor and Delivery for a diagnosis of chorioamnionitis. She had a spontaneous vaginal delivery. A beta hemolytic streptococcus was isolated from the patient'surine, placenta, endometrium, and two blood culture sets. Testing for Streptococcus Lancefield groups A, B, C, F and G was negative. Biochemical studies included a positive pyrrolidonyl aminopeptidase (PYR) test and a negative catalase reaction. The isolates were resistant to optochin. API identification revealed Streptococcus agalactiae (biotype number 3063214) with 99.8% confidence at 24 hours. Identification of all isolates by matrix assisted laser desorption ionization time-of-flight (MALDI, Bruker) yielded Streptococcus pseudoporcinus, using the research use only database with log scores for each specimen ranging from 1.86 to 2.07. A blood culture isolate sent to a reference laboratory for bacterial 16S rRNA sequencing confirmed the identification of Streptococcus pseudoporcinus, with 100% identity of the first 467 base pairs of the 16S sequence to Streptococcus pseudoporcinus LQ 940-04. The patient recovered well in the postpartum period and left the hospital on postpartum day 4.

CONCLUSION: S. pseudoporcinus can be difficult to distinguish from S. agalactiae. Although the exact clinical significance of S. pseudoporcinus remains to be seen, our case demonstrates that it is a potential cause of serious puerperal infection. If there are other reports of puerperal infections with this organism, its significance and prevalence in genital tract flora may warrant further investigation.

LEARNING OBJECTIVES: Explain the evidence from a case that demonstrates that S. pseudoporcinus is a potential cause of chorioamnionitis and severe perinatal morbidity and mortality.

22 Pregnancy among young women with perinatally acquired HIV: a unique single site experience

J. Potter[1], L. Duthely[1], B. Messick[1], J. Galli[1], A. Garcia[1], G. Scott[1], A. Cotter[2]
[1]University of Miami Miller School of Medicine, FL, [2]University of Limerick, Ireland

OBJECTIVES: Describe the perinatal outcomes among a unique cohort of women with perinatally acquired HIV infection (PHIV), followed from childhood or adolescence through pregnancy.

METHODS: All PHIV who received primary care as children or adolescents, became pregnant, received at least one prenatal care visit, and delivered a live born child from 2004-2017 were included. Date of death and cause of maternal death were recorded. Infants were screened for HIV based upon the Centers for Disease Control HIV screening guidelines (USPHS 2018).

RESULTS: We identified 53 adolescents and young women who were born with perinatally acquired HIV infection and subsequently received prenatal care and delivered their first child at our institution. A total of 72 pregnancies resulted in a live birth; 37 with one, 13 with two, and three women with three. There were no multiple births. The mean maternal age at time of first delivery was 20.8 years old (range 15-28), 77.3% were Black (African-American or Haitian) and most initiated prenatal care in the first or second trimester. Over half of these young women (50.9%) had an AIDS diagnosis prior to their first prenatal visit; there were no new AIDS diagnoses during pregnancy. All began pregnancy on HAART. Hypertensive disorders affected 16.7%, and there were no cases of diabetes before or during pregnancy. Almost 30% had one or more psychiatric diagnoses, 32% had an STI diagnosis at first pregnancy. During the prenatal period, 12 of the 53 young women were hospitalized. Six (50%) had two or more admissions prior to delivery. Hyperemesis was the most common admitting diagnosis. At the first prenatal visit 42.5% had a viral load <1000 and only 17 (23.6%) had a CD4 count >500. Near delivery 54 (75%) had a viral load of <1000. All (100%) received antiretroviral therapy intrapartum. Cesarean (83.3%) was the most common mode of delivery, of which 15.3% were emergency. Mean gestational age was 36.9 weeks, with four <32 weeks. Five of the 53 mothers expired after the postpartum period (2.6-5.9 years later). Pediatric screening was completed for 61/72 children with a zero perinatal transmission rate.

CONCLUSION: This unique single site large cohort study demonstrates that although complex, these pregnancies are not associated with a high risk of obstetric complications. Despite the Cesarean rate was high, the perinatal transmission rate was zero without an increased risk of obstetric related maternal deaths.

LEARNING OBJECTIVES: Learners will be able to demonstrate knowledge of perinatal outcomes among young women with perinatally acquired HIV infection.

23 Natural history of asymptomatic bacterial vaginosis among Kenyan women at high risk for HIV infection

M. Pyra[1], A. Abdala[2], K. Mwinyikai[2], W. Jaoko[2], K. Mandaliya[3], R. S. McClelland[2,4], J. E. Balkus[4]
[1]University of Chicago, Chicago, IL, USA, [2]University of Nairobi, Nairobi, Kenya, [3]PathCare, Mombasa, Kenya, [4]University of Washington, Seattle, USA

OBJECTIVES: To describe the natural history of incident asymptomatic bacterial vaginosis (BV) by Nugent score and identify factors associated with either BV resolution (Nugent score ≤ 4) or development of symptomatic BV.

METHODS: We identified women who experienced an incident asymptomatic BV infection (no self-reported discharge or itching) enrolled in the Mombasa Cohort, an open prospective cohort of women engaged in transactional sex in Mombasa, Kenya. Using competing risk models, we calculated the cause-specific hazard of resolving asymptomatic BV or developing symptomatic BV over up to 12 months, compared to no change in BV; the final model included baseline age, HIV status, Nugent score, Amsel criteria, contraceptive use, and frequency of vaginal sex. Women were censored if they received BV treatment or became pregnant; women with yeast diagnoses at baseline were excluded from this analysis.

RESULTS: Among 964 women with incident asymptomatic BV by Nugent score (mean 8.2), the mean age was 33 years; 98% had clue cells on saline microscopy, 85% had a pH ≥ 4.5, 32% had a positive whiff test, and 24% had abnormal vaginal discharge identified clinically during pelvic examination. With an average 112 days of follow-up, 578 (60%), women had resolution of incident asymptomatic BV, with an average of 93 days (range 33-128) until resolution; 83 (9%) women developed symptoms, with an average 100 days (range 42-147) till symptoms; and 303 (31%) women had no change in BV status, with an average 153 days (range 64-247) of follow-up. Women with a baseline Nugent score of 9 or 10 (adjusted hazard ratio [aHR]=0.59; 95% CI 0.46, 0.75), pH ≥4.5 (aHR 0.66; 95% CI 0.51, 0.87), or positive Whiff test (aHR 0.87; 95% CI 0.70, 1.08) had lower hazards of resolving BV compared to women who had no change in status. Women reporting use of depot medroxyprogesterone acetate (aHR 1.32; 95%CI 1.03, 1.70) or condoms (aHR 1.42; 95% CI 1.08, 1.87) as their current contraception had a higher hazard of resolving BV compared to women with no change. Among women who resolved BV, 4.7% later developed symptoms with an average of 103 days from resolution to symptomatic BV.

CONCLUSION: Over a year of follow-up, the majority of women with incident asymptomatic BV did not develop symptoms in the absence of treatment. However, almost a third of women remained asymptomatic with elevated Nugent scores. Baseline clinical factors may be useful in identifying these women who may remain at high risk for sequelae associated with asymptomatic BV.

LEARNING OBJECTIVES: Learners will be able to describe the natural history of incident asymptomatic BV and the proportion of women who resolve BV without treatment.

24 The effect of estimated blood loss on postpartum infection risk

Anne M. Siegel[1], R. Phillips Heine[2], Sarah Dotters-Katz[1]
[1]Division of Maternal Fetal Medicine, Department of Obstetrics and Gynecology at Duke University Hospital, Durham, NC, [2]Division of Maternal Fetal Medicine, Department of Obstetrics and Gynecology at Wake Forest University, Winston-Salem, NC

OBJECTIVES: Current guidelines for obstetric antimicrobial prophylaxis recommend additional intra-operative antibiotics for excessive blood loss defined as >1.5L. This recommendation is based on studies performed on patients undergoing spinal surgeries. Given the different risk profile of infection for patients undergoing Cesarean delivery, we aimed to evaluate rates of postpartum infection based on estimated blood loss(EBL).

METHODS: Retrospective cohort study of all women at a single institution undergoing Cesarean delivery from January-June 2014 and January-June 2016. Women with EBL<1.5L were compared with EBL ≥1.5L. Women were excluded only for vaginal birth and outcomes were tracked until 42 days postpartum. The primary outcome was composite postpartum infection characterized by a wound infection or endometritis. Secondary outcomes included the wound hematoma, seroma, or infection, endometritis, readmission for wound complications, wound debridement, outpatient visit for antibiotics or wound complication. Backwards-stepwise regression was used to estimate adjusted odds of primary outcome.

RESULTS: 2202 women met inclusion criteria; 104 (4.7%) women had an EBL ≥1.5L and 2098 (95.2%) had EBL <1.5L. Women with EBL ≥ 1.5L were more likely to be older, receive a blood transfusion, and receive postpartum antibiotics. Women with EBL ≥1.5L were less likely to have had an abdominal or vaginal surgical prep with chlorhexadine. There were also trends towards women with a larger EBL to have a multiple gestation, repeat Cesarean, Cesarean after labor, and chorioamnionitis although these failed to reach statistical significance. An EBL ≥ 1.5L was associated with a decreased risk of postpartum infection (aOR 0.26 95% CI 0.08-0.82) although rates of wound infection (aOR 0.31 95%CI 0.09-1.1), readmission (p=0.72) or outpatient treatment for a wound infection (p=>0.99) were not different between groups.

CONCLUSION: In this cohort, estimated blood loss greater than 1.5 liters with Cesarean delivery was associated with decreased risk of postpartum infectious morbidity related to endometritis or wound infections. However, women with higher EBL were treated differently in the intrapartum/postpartum period including receipt of additional antibiotics, which may explain their decreased infectious morbidity

LEARNING OBJECTIVES: 1. Learners will recognize the paucity of data on re-doing of antibiotics in the obstetric population and determine need for further research to determine the estimated blood loss associated with higher infection risk.

25 Prevalence of congenital CMV infection in Colombia

V. Tong[1], S. Corchuelo[2], J. Cates[1], K. Laiton-Donato[3], S. Dollard[1], A. Rico[3], T. Lanzieri[1], J. Acosta[2], E. Ailes[1], H. Rodríguez[3], J. Ricaldi[1], M. González[3], D. Pelaez[3], D. Valencia[1], M. Mercado[3], M. A. Honein[1], M. Ospina[3]
[1]Centers for Disease Control and Prevention, Atlanta, GA, [2]Vysnova Partners Inc, Bogotá, Colombia, [3]Instituto Nacional de Salud, Bogotá, Colombia

OBJECTIVES: The prevalence of congenital cytomegalovirus (CMV) infection ranges from 0.6% to 3.2% in studies conducted in Brazil, Chile, Panama, and Mexico, but data from other Latin American countries are lacking. This study assessed the prevalence of congenital CMV infection among infants born to women in a prospective cohort study in Colombia.

METHODS: During October 2017-September 2018, urine samples were collected from infants born to women enrolled in the Zika en Embarazadas y Niños en Colombia cohort study in cities from three regions in Colombia. The first infant urine samples collected after birth were tested. Congenital CMV infection was defined as a positive result by quantitative polymerase chain reaction within 21 days of birth using the CMV R-gene kit (Argene) for detection of CMV DNA, and confirmatory testing was conducted in a second laboratory.

RESULTS: Among 657 infants with a urine sample collected within 21 days of birth (median=15 [interquartile range, IQR: 13-17] days), 8 infants (1.2%; 95% confidence interval [CI]=0.6-2.4%) were CMV-positive. The prevalence of congenital CMV infection was 1.6% (95% CI=0.6-4.7%) in Valle, 1.6% (95% CI=0.7-3.8%) in Barranquilla, and there were no cases of congenital CMV infection in Bucaramanga. The median viral load was 2.7*105 copies/mL [IQR: 9.16*103 − 1.02*107). Median maternal age was 22.2 years (IQR: 19.6-28.7) among mothers of CMV-positive infants compared to 25.3 (IQR: 21.0-30.0) years among mothers of CMV-negative infants (p=0.33).

CONCLUSION: Congenital CMV infection prevalence in our cohort was within the range reported from other studies in Latin America. Clinical follow-up is ongoing for CMV-positive infants. Studies including cohorts of pregnant women and infants offer an opportunity to understand the burden of congenital CMV infection and associated disabilities.