LEARNING OBJECTIVES: more confidently treat patients with RVVC using maintenance fluconazole for longer than the previously described six months.

6 Time has come for routine penicillin skin allergy testing in obstetrics

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OBJECTIVES: Penicillin skin allergy testing has been advocated as part of antimicrobial stewardship initiatives, yet no estimate is available to determine how many women during pregnancy would benefit from this intervention. We evaluated the feasibility of penicillin skin allergy testing during pregnancy.

METHODS: Between January 1, 2018 to December 31, 2018, an Institutional Review Board-approved retrospective electronic medical record review of women who delivered and reported a penicillin allergy was performed. Sociodemographic variables, antibiotics utilization and indications, and allergic reactions from the first prenatal visit up through 6 weeks postpartum were extracted. All penicillin allergies were reviewed and coded for low or high risk for anaphylaxis.

RESULTS: 6321 deliveries occurred, of which 446 (7%) reported a penicillin allergy. Allergies were recorded at the initial encounter in 100% of patients at a mean gestational age of 15.2 ± 7.5 weeks gestation. Allergies associated with low risk of an anaphylaxis were reported in 45% (201/446) of women. Ten percent (44/446) of women had no documentation of the allergy severity. A total of 75% (334/446) of women received an antibiotic during the course of the pregnancy. The most common antibiotic indications were administration for cesarean prophylaxis (182/334, 54%), group B streptococcus (GBS) colonization (104/334, 31%), and urinary tract infection (62/334, 18%). Of the women categorized as low risk for anaphylaxis and eligible for a first generation cephalosporin, 49% (20/41) of those colonized with GBS and 51% (33/65) that underwent cesarean delivery did not receive an appropriate antibiotic regimen.

CONCLUSION: A majority of women during pregnancy that report an allergy to penicillin receive antibiotics. Over half of these women could be candidates for penicillin skin allergy testing. Most of these women are identified at a gestational age that allows the implementation of testing in an outpatient setting. Despite guidelines on the proper use of antibiotic prophylaxis in women with penicillin allergy during pregnancy, the variation in the recorded allergies and suboptimal antibiotic use suggest that penicillin skin allergy testing may improve antibiotic stewardship. Although optimization of guideline adherence could improve antibiotic selection, penicillin skin allergy testing determines the true risk of anaphylactic reaction rather than relying on the interpretation of the clinical history.

LEARNING OBJECTIVES: Leaners will have an understanding that a large portion of women during pregnancy will benefit from penicillin skin allergy testing.

7 Plague during pregnancy: a systematic literature review

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OBJECTIVES: To examine maternal and fetal mortality, risk of maternal-fetal transmission, and other outcomes associated with Yersinia pestis infection in order to better understand the clinical implications of plague during pregnancy.

METHODS: We searched twelve literature databases, performed hand searches, and consulted plague subject matter experts to identify articles published on plague during pregnancy. Articles that reported cases of infection during pregnancy and at least one maternal or fetal outcome were included. We abstracted information related to the clinical features of plague, maternal antibiotic treatment, maternal and fetal morbidity and mortality, and evidence for maternal-fetal transmission of Yersinia pestis.

RESULTS: Our search identified 5,922 articles, of which 59 were eligible for inclusion and described a total of 159 cases of plague in pregnant women. Cases were reported between 1897 and 2002 from 20 different countries worldwide. The majority of cases were published during the pre-antibiotic era; only 24 (15%) patients in this review were treated with antibiotics. Of those with primary manifestation of plague reported, 85% were bubonic, 13% were pneumonic and 3% were septicemic. Maternal and fetal fatality was 66% and 73%, respectively, among mothers not treated with antibiotics. In comparison, among mothers treated with antibiotics, maternal and fetal fatality was 29% and 62%, respectively. Of the 33 live births from untreated mothers, 21% were born preterm and 33% subsequently resulted in neonatal death. Among the five live births from treated mothers, there were no reports of premature birth or neonatal death. In untreated mothers, there were five cases with laboratory evidence of Yersinia pestis in either placental, fetal, or neonatal tissues examined immediately after delivery.

CONCLUSION: Plague during pregnancy is associated with high rates of maternal and fetal mortality; however, with appropriate antibiotic treatment, mothers and infants can survive. There is evidence to suggest that without maternal antibiotic treatment, maternal-fetal transmission of Yersinia pestis can occur. Taken together, these results indicate the need to define the ideal antibiotic regimen to treat pregnant women with plague to maximize maternal and infant survival.

LEARNING OBJECTIVES: Learners will be able to identify cases of plague during pregnancy and the risks of associated maternal and infant morbidity and mortality. This knowledge will help providers treat pregnant women with plague more effectively.

8 The impact of the vaginal microbiome on HIV infectivity among pregnant and non-pregnant women

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OBJECTIVES: Epidemiologic studies have demonstrated that disruption of vaginal flora in the form of bacterial vaginosis is related to increased risk of HIV acquisition. However, there is a paucity of biologic data to support this association. In this study, we aim to identify the specific alterations in the vaginal microbiome associated with risk of HIV infectivity.

METHODS: We analyzed cervicovaginal lavage specimens previously collected from 42 (22 pregnant and 20 non-pregnant) healthy