

IDSOG Posters Thursday 2017

1 Group B strep and associated complications in cesarean delivery



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OBJECTIVES: The objective of this study is to determine the effect of Group B streptococcus (GBS) on maternal infectious complications in women undergoing cesarean delivery (CD) in an era of routine GBS antibiotic prophylaxis during labor.

METHODS: Retrospective cohort of women undergoing CD during labor at 37 weeks gestation or greater from January to December 2014. Intrapartum and postpartum complications were compared between women without GBS and those with a positive culture or unknown GBS status. Routine pre-operative antibiotics were used for all women. Labor at time of cesarean was documented by physician notes. Univariate analysis was performed using chi-square and Mann-Whitney U tests. A logistic regression analysis was then performed to control for potential confounders.

RESULTS: 398 women had complete data and were included. 255 women (64%) were GBS negative, and 143 were GBS positive or unknown (36%). Compared to GBS negative women, GBS positive women were had a higher BMI and parity, and lower gestational age at delivery. They were less likely to have private insurance or be of white race. They had an increased incidence of gestational diabetes or hypertensive disorders of pregnancy. There were no significant differences in length of rupture of membranes, reported penicillin allergies, or surgical technique. In univariate analysis, women with GBS were noted to have a significantly lower incidence of clinical chorioamnionitis (5% vs 18%, $p=0.001$). There were no differences in rates of endometritis or wound infection. In adjusted analysis for the outcome chorioamnionitis, women with GBS had a decreased risk of chorioamnionitis (aOR 0.17, 95% CI 0.07, 0.44).

CONCLUSIONS: Within our cohort, women who were GBS positive and underwent CD in labor had a significantly lower risk of chorioamnionitis than women who were GBS negative. There were no significant differences in other postpartum infectious complications.

2 Penicillin skin testing in pregnant women with a history of penicillin allergy



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OBJECTIVES: The objective of this study is to report the feasibility and success of penicillin skin testing as well as appropriate administration of antibiotics in pregnant women with a history of penicillin allergy.

METHODS: Our protocol advised referral for penicillin allergy testing of pregnant women reporting any history of a type I penicillin allergy other than recent anaphylaxis. Testing took place on our OB triage unit. All women mounted a positive response to the control histamine test prior to receiving the penicillin skin test. If results of penicillin skin testing were negative, women were given a single oral dose of amoxicillin and observed for an additional hour. Rates of true penicillin allergy and subsequent administration of appropriate antibiotics during labor were recorded.

RESULTS: 53 pregnant women presented for penicillin allergy testing from January 2016 to March 2017. The mean age of these women was 29.7 (SD 4.98). The mean body mass index (BMI) at entry to care was 28.3 (SD 10.17). The mean gestational age at time of testing was 29.66

weeks (SD 7.87). Women were 63% Caucasian, 24.1% African American, 7.4% Asian, and 5.6% unknown or not reported. 59.3% had private insurance and 40.8% were Medicaid, self-pay, or other. Median parity was 1 (0.0, 1.0). The majority (54.7% or 29/53) of those who completed testing had a Type I allergy (hives, swelling, or anaphylaxis). Other reactions included 30.2% rash, 5.7% GI upset, and 9.4% unknown. All 53 women who had penicillin allergy testing were negative for penicillin allergy. Of the 53 women tested, 44 have delivered. Antibiotics were required at the time of delivery in 30/44 (68%) of these patients. Nineteen were GBS positive and eleven required prophylaxis for cesarean section. All patients received appropriate antibiotics (penicillin, ampicillin or cefazolin) and none had an allergic reaction.

CONCLUSIONS: All 53 of the women who reported a history of penicillin allergy had a negative penicillin allergy test. Penicillin allergy testing is feasible in the pregnant population, and a negative result allows for optimal administration of antibiotics for GBS and cesarean section prophylaxis.

3 Cost analysis of negative pressure wound therapy in morbidly obese women at the time of cesarean



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OBJECTIVES: To determine whether routine use of prophylactic negative pressure wound therapy (NPWT) after cesarean delivery (CD) in patients with body mass index (BMI) ≥ 40 is a cost saving strategy to reduce surgical site infections compared to standard incisional care (SC).

METHODS: A decision tree was designed from a universal payer perspective to compare strategies for incision management of 1) SC and 2) prophylactic NPWT after labored and unlabored CD. Rates of surgical site infections, re-hospitalization, and wound debridement were obtained from a cohort of women with BMI ≥ 40 who underwent cesarean delivery in 2014 and 2015. Costs were estimated using previously published estimates and Medicare reimbursement. The NPWT cost (\$374) was obtained from the hospital financial department.

RESULTS: In this cohort, 143 women underwent labored CD and 189 women underwent unlabored CD. The mean BMI of the cohort was 47.8 (± 6.2). Surgical site infection reductions of 68% for labored and 76% for unlabored cesarean deliveries were assigned. Modeling in this morbidly obese cohort resulted in an overall cost reduction of incision care of \$480 per patient for unlabored CD and \$550 per patient for labored CD with NPWT compared to SC.

CONCLUSIONS: Prophylactic NPWT is a cost saving strategy to reduce infectious wound complications after cesarean delivery in women with a BMI ≥ 40 .

4 Impact of vitamin D supplementation on bacterial vaginosis in pregnancy



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OBJECTIVES: To investigate the association between bacterial vaginosis (BV) and vitamin D deficiency in a prospective, randomized cohort of pregnant women.