



Bacterial Growth in Placental Swab Cultures Done Among Women Who Received Ampicillin Prophylaxis for Term Prelabor Rupture of Membranes: Matched Cohort Study

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ABSTRACT

Purpose: To compare rates of positive bacterial growth in placental swab cultures done among women who received ampicillin prophylaxis at different timings after term PROM.

Materials and Methods

Design: Matched Cohort Study

Setting: Department of Obstetrics and Gynecology at Southern Philippines Medical Center in Davao City, Philippines

Participants: One hundred twenty pregnant mothers at ≥ 37 weeks age of gestation, aged ≥ 18 years old who have a history of gross pooling of amniotic fluid and have a singleton pregnancy in vertex position and have no other infections and co-morbidities

Methodology: A total of 120 patients consented and were included in the study. These patients were grouped according to the onset of watery vaginal discharge up to the time where antibiotic was initiated. They were then grouped in the 6th hour, 12th hour and 18th hour group. Blood tests such as WBC and CRP were obtained upon admission on these patients. Monitoring of maternal temperature and heart rate, fetal heart rate, monitoring for the occurrence of uterine tenderness and vaginal discharge were done. After delivery, placental swab of the patients were submitted for culture and sensitivity.

Results: The mean age of patients belonging to the 6th hour group is 25.4, 26 for patients in the 12th hour group and 26.4 in the 18th hour group. Most of the patients were single with an OB Score of G1P0. There were no significant differences in the age, civil status, gravidity and parity among the groups. There were no significant differences in the clinical signs of intraamniotic infection (IAI) mentioned among the 3 groups. There was no association between the occurrence of maternal infection based on WBC in the 3 groups. However, more patients in the 12th hour and 18th hour group have elevated WBC. There is a significant association between CRP positivity and the 3 groups of PROM. There are more patients in the 12th hour group and 18th hour group who showed a positive result for CRP. For placental swab culture, there is no association between bacterial growth among the 3 groups. Bacterial growth were observed in 27/40 (67.5%) of cultures in the 6H group, 31/40 (77.5%) of cultures in the 12H group, and 31/40 (77.5%) of cultures in the 18H group. Across all groups, the five most common isolates were *Escherichia coli*, *Staphylococcus hominis*, *Staphylococcus haemolyticus*, *Staphylococcus epidermidis*, and *Enterobacter cloacae*. In the 3 groups, the predominating bacteria was *Escherichia coli*. This organism is 71% sensitive to Ampicillin and 100% sensitive to Amikacin, Amoxicillin/Clavulanic acid, Aztreonam, Cefepime, Cefotaxime, Cefoxitin, Cefuroxime, Ciprofloxacin, ertapenem, Imipenem and Meropenem.

CONCLUSION: Among the 3 groups, there were no significant difference in their clinical signs of IAI. However, laboratory parameters showed that there were more markers of infection seen on patients who received the antibiotic later. Elevated WBC and bacterial growth in the placenta were higher in the 12th hour and 18th hour group, although not significantly different among the 3 groups. There was also a significant difference in the CRP positivity among the 3 groups. There were more patients who showed a positive CRP result on those who received the antibiotic later. This study recommends that starting antibiotic earlier in the 6th hour is beneficial.

BIOGRAPHY

Melissa Corinales-Lomod is Diplomate of the Philippine Board of Obstetrics and Gynecology. In 2016, she served as Chief Resident of OB-GYN Dept. She completed her Graduation in Dr. Jose P. Rizal School of Medicine, Xavier University, Ateneo de Cagayan (2005-2009).

PUBLICATION

1. Melissa Corinales-Lomod: SPMC J Health Care Serv. 2017;3(2):6 - Bacterial growth in placental swab cultures done among women who received ampicillin prophylaxis for term prelabor rupture of membranes: matched cohort study.

[2nd World Congress on Primary Healthcare and Medicare Summit](#) | Paris, France | February 19-20, 2020

Citation: Melissa Corinales-Lomod, Bacterial Growth in Placental Swab Cultures Done Among Women Who Received Ampicillin Prophylaxis for Term Prelabor Rupture of Membranes: Matched Cohort Study, Primary Healthcare 2020, Paris. February 19-20, 2020, PP. 07