

ABSTRACT

Introduction:

Prelabour rupture of membranes is seen in 8 % of term pregnancies. It is associated with an increased risk of morbidity and mortality in mother as well as in fetus.

As there is a significant time lag from the onset of labour to delivery, it is reasonable to be on prophylactic antibiotics for reduction of these infections. However available evidences on the necessity of prophylactic antibiotic are limited hence some healthcare centers use them routinely while others do not.

Setting: Professorial Obstetric ward of Teaching Hospital Peradeniya.

Objectives:

The aim of the study was to identify whether the use of prophylactic antibiotic; Cefuroxime in mothers presenting with prelabour rupture of membranes at term (after 37 weeks of gestation to 42 weeks) can reduce fetomaternal and neonatal infections compared with a group without prophylactic antibiotics in early induction of labour.

Method:

Study design - Randomized controlled trial.

Mothers with term pre-labour rupture of membranes who fulfill the criteria and consented for participation were recruited into the study.

They were randomized into two groups using a computer based randomization table.

Antibiotics were started on one group; intravenous Cefuroxime 750 mg 08 hourly for 24 hours followed by oral cefuroxime 500 mg 12 hourly for 48 hours while there were no prophylactic antibiotics to the other group.

Mothers were induced with intravenous oxytocin if labour was not started spontaneously by 12 hours of dribbling (Early induction method – Unit protocol).

Development of chorioamnionitis, postpartum endometritis and neonatal infection (Sepsis/ Meningitis/ Pneumonia) were recorded using a pre tested data collection sheet.

Results:

A total of 118 subjects were studied. From them 60 were in the intervention arm to whom the prophylactic antibiotics were given and 58 were in the control arm, to whom the antibiotics were not given.

There were no statistically significant differences in age, BMI, period of gestation, proportion of primi gravida, duration of membrane rupture prior to include into the study, duration from membrane rupture to delivery, duration of labour, total number of vaginal examinations performed, number of caesarean sections and the birth weight of the neonates delivered in each group.

There was a case of chorioamnionitis (n = 60, 1.67%) in the intervention arm while there were two (n = 58, 3.45%) in the control arm. However this difference was not significant (OR-0.47, 95% CI 0.04-5.27).

One neonate in the intervention arm (n=60, 1.67%) and three neonates in the control arm (n=58, 5.17%) had sepsis. The difference was not statistically significant (OR-0.31, 95% CI 0.03-3.02).

Two cases of post-partum endometritis (n=58, 3.45%) were seen in the control arm where there was no one in the intervention arm (n=60, 0%). The difference was not statistically significant (OR – 0.19, 95% CI 0.01-3.88).

Post-partum sepsis was not reported in both arms.

As a whole there was not any statistically significant difference on maternal infection related morbidities in the intervention group (n=60, 1.66%) and the control group (n=58, 6.89%) of the study (OR-0.25, 95% CI 0.03-2.22).

Conclusion:

The study was unable to demonstrate any significant benefit of prophylactic antibiotics in mothers with term prelabour rupture of membranes on any of its outcome measures with early induction of labour.