**PRETERM PREMATURE RUPTURE OF THE MEMBRANES (PPROM)**

Preterm Premature Rupture of the Membranes (PPROM): Latency antibiotics

**SUMMARY:** Administration of broad-spectrum antibiotics to women with PPROM prolongs pregnancy, reduces maternal and neonatal infection, and reduces gestational age dependent morbidity.

**Rationale:** Multiple meta-analyses and randomized controlled trials, including those from the ORACLE collaborative group, have confirmed the efficacy of broad spectrum antibiotic treatment in prolonging the latency period, prolonging gestational age, and reducing the incidence of chorioamnionitis and neonatal infection and intraventricular hemorrhage in the setting of PPROM. Although there is no conclusive evidence demonstrating that a single regimen that is superior, a 7-day course of antibiotic therapy including a macrolide (erythromycin or azithromycin) is effective. The mechanism of action of the prolongation of the latency period achieved by antibiotic treatment of women with PPROM may be more complex than simply prevention of chorioamniotic infection.

**Eligible patients:** Women presenting with preterm premature rupture of the membranes in the absence of labor or overt infection between the gestational ages of 20 and 34 weeks.

**Exclusions:**

- PPROM with labor or chorioamnionitis.
- Nonreassuring fetal status.
- Women who decline expectant management.
- *Care should be exercised when vaginal bleeding accompanies PPROM.*

**Technique:**

The following two classic antibiotic regimens are preferred to achieve latency in PPROM (These two regimens were used in the largest PPROM randomized controlled trials that showed a decrease in both maternal and neonatal morbidity):

1. Amoxicillin 2 g IV every 6 hours and erythromycin 250 mg IV every 6 hours for 48 hours followed by amoxicillin 250 mg orally every 8 hours and erythromycin 333 mg orally every 8 hours for 5 days to complete a 7 day total.
2. Patients allergic to penicillin: Erythromycin ONLY, 250 mg orally every 6 hours for 10 days

**ADAPTED ANTIBIOTIC REGIMENS** (Azithromycin is commonly substituted for erythromycin due to a lesser side effect profile and is an acceptable alternative)

3. Amoxicillin 2 g IV every 6 hours for 48 hours and azithromycin 1 g orally in a single dose followed by amoxicillin 250 mg orally every 8 hours for 5 days to complete 7 days of coverage.
4. Patients allergic to penicillin: Azithromycin ONLY, 1 g orally in a single dose for PPROM plus GBS coverage as appropriate.
Special Considerations:

- The use of amoxicillin–clavulanic acid has been associated with increased rates of necrotizing enterocolitis and it is not recommended.
- Women presenting with PPROM should be screened for other infections including GBS and treated with appropriate antibiotics if positive.
- Patients who do not have penicillin allergies should receive antibiotic regimen #3 regardless of GBS status. This includes women who are GBS negative and complies with CDC guidelines, which state that latency antibiotic regimens should be continued until completed even if labor is not present. This regimen provides adequate GBS coverage for those patients who are GBS positive. If GBS cultures are not done before antibiotics are initiated (ie GBS unknown), this regimen is also appropriate.
- Penicillin allergic patients should receive antibiotic regimen #4 for PPROM latency regardless of GBS status AND also need GBS treatment if positive or unknown at the time of presentation. Cultures should be sent requesting sensitivities in this group of patients. Those who are known to be GBS negative need no additional antibiotics. Those who are GBS positive or unknown (ie no culture done before antibiotics initiated or culture pending), should also receive GBS prophylaxis for 48 hours according to CDC guidelines (cefazolin for low risk penicillin allergy and vancomycin for high risk allergy). If they are not laboring, the antibiotics for GBS prophylaxis should be discontinued.
- Women with preterm PROM and a viable fetus who are candidates for intrapartum GBS prophylaxis (i.e. positive rectovaginal swab at time of PROM, prior positive GBS urine, unknown GBS result) should receive intrapartum GBS prophylaxis to prevent vertical transmission regardless of earlier treatments.

References

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