Texas Tech University Health Sciences Center El Paso
Obstetrics and Gynecology

Protocol #5

PRETERM PREMATURE RUPTURE OF MEMBRANES

A. Background

Preterm premature rupture of membranes (PPROM) is defined as rupture of membranes prior to 37 weeks and before the onset of labor. PPROM complicates approximately 3% of pregnancies each year in the United States. Rupture of membranes before viability complicates about 1% of pregnancies. Complications associated with pre-viable PPROM include endometritis, placental abruption and retained placenta. Additionally the rate of pulmonary hypoplasia with rupture prior to 24 weeks is as high as 20%. After 23 weeks gestation, pulmonary hypoplasia is less common. Prolonged anhydramnios can result in limb deformations and contractures. Prolonging the period from membrane rupture to delivery has been shown to improve outcomes but has the associated risk of increased risk of infection.

B. Diagnosis

1. visualization of amniotic fluid from the cervix with pooling in the vagina
2. Ferning – arborization pattern of dried vaginal fluid under microscopy
3. Positive nitrazine test. Amniotic fluid has a pH of 7.1-7.3 and the normal vaginal pH is 4.5-6
4. There are various tests on the market, Amnisure, ROM-plus; these tests if available should be considered an adjunct to standard methods

NOTE – Avoid a digital cervical exam

Management

All patients with PPROM and viable pregnancies must be admitted.

1. **≥34 0/7 weeks gestation with good dating**
    - Induction of labor

2. **24 0/7 -34 0/7 weeks and not in labor with no sign or symptoms of infection:**
   Expectant management: If labor ensues do not use tocolytic agents.
   - 24wks – 33w6d give a single course of steroids for lung maturity
   - Antibiotics to prolong latency :
     - Ampicillin 2 gms IV and erythromycin 250 mg IV Q6 hours x 48 hours followed by amoxycillin 250 mg p.o. and enteric-coated erythromycin base 333 mg p.o. every 8 hrs for 5 days.
     - a cephalosporin may be substituted for ampicillin/amoxycillin and metronidazole may be substituted for erythromycin.
   - Cultures for GBS and Chlamydia should be obtained.

- White blood cell count and differential will be performed as indicated.
- Above management may be modified if amniocentesis is performed and amniotic fluid is available for maturity and bacterial studies.
- Fetal heart rate monitoring should be performed q shift
- BPP to be done only if clinically indicated.
- Tocolytics can be used to accomplish maternal transport

3. <23 0/7 weeks

- patient counseling regarding expectant management vs induction of labor
- If choose expectant management
    1. Give 24 hours of IV antibiotics this may prolong latency but also allows observation to rule out chorioamnionitis.
    2. discharge to home after 24 hours of IV antibiotics with instructions to return for admission at 23 weeks

4. If overt chorioamnionitis or maternal sepsis, immediately induce labor.

REFERENCES

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