UC MFM PROM PROTOCOL

I. Diagnosis

a. History consistent with membrane rupture
b. Sterile speculum exam:
    i. Vaginal Pooling
    ii. Arborization (ferning)
        1. Allow specimen to dry on slide for 10 minutes
        2. Not affected by meconium, small amounts of blood or changes in pH
        3. Moderate amounts of blood may give false negative
        4. Cervical mucus may give false positive
    iii. AmniSure ROM™
    iv. Obtain swabs for GBS, GC, Chlamydia, and obtain urine culture
    v. Visually assess cervical dilation (avoid digital exams if patient is candidate for expectant management)
c. Ultrasound evaluation of amniotic fluid (non-diagnostic but useful)
d. Intra-amniotic instillation of fluorescein 5ml 10%
    i. Consider in the event of strong clinical history but negative exam findings. Need to visually examine cervix either at 15 and 45 min or tampon test in < 1 hour.
    ii. Caution: fluorescein will also turn maternal urine fluorescent green

II. Initial Management

a. Evaluate fetal well-being with NST and BPP as indicated
b. Avoid digital vaginal examination unless imminent delivery is anticipated
c. Ultrasound:
    i. Confirm gestational age
    ii. Document fetal number, presentation, weight and AFI
    iii. Rule out major fetal anomalies
    iv. Obtain perinatal ultrasound when available
d. Admit to labor and delivery for observation and monitoring when indicated by gestational age.
e. Begin GBS prophylaxis as indicated for patients at the gestational age at which parents desire intervention or after $24^{0/7}$ weeks with the presence of labor or suspicion of imminent delivery.
f. Latency antibiotics:
    i. In the setting of previable ROM **prior to $20^{0/7}$ weeks, please refer to the OB practice protocol on previable PROM.** In the setting of pre or periviable PROM **between $20^{0/7}$ and $23^{6/7}$ weeks,** latency antibiotics should be considered after counseling by both MFM and NICU in accordance with ACOG/SMFM Consensus on periviable birth. If the patient desires expectant management, antibiotics can be offered at time of ROM or at the time of hospital admission (when patient would desire monitoring and intervention-see below) but should NOT be administered twice
    ii. Recommend administration of latency antibiotics for patients with PPROM **between $24^{0/7}$ and $33^{6/7}$ weeks**.
    iii. 7 day course of combined IV and oral antibiotics
        1. IV Ampicillin (2g Q6 hours) x 48 hours followed by oral amoxicillin (250mg Q8 hours X 5 days) AND oral azithromycin 500 mg x one day, then 250 mg x 4 days . Both ampicillin and azithromycin start on day one
            a. Do NOT use amoxicillin-clavulanic acid
        2. In the event of a B-lactam allergy:
            a. In labor, provide IV antibiotic for GBS prophylaxis
                i. Penicillin G 5 million units, then 3 million units Q4 hours. If PCN allergy that is not anaphylaxis/hives/concern for severe allergy, administer cefazolin 2g then 1g Q8 hours. If severe allergy, administer vancomycin 1g Q12 hours until delivery UNLESS clindamycin susceptibility is known, at which point clindamycin (900mg Q8 hours) can be administered.

b. Not in labor, for latency prolongation- may replace ampicillin/amoxicillin with another antibiotic that is effective for GBS prophylaxis (i.e. cephalosporin). If another option does not exist, may use azithromycin alone

g. Administer steroids in accordance with ANCS Protocol. Rescue course can be considered if patient is a candidate (see ANCS protocol).
h. Initiate fetal neuroprotective treatment with magnesium sulfate in preterm PROM before $32^{0/7}$ weeks in patients thought to be at risk of imminent delivery.
i. For women with PROM ≥ $37^{0/7}$ weeks, if spontaneous labor does not occur near the time of presentation and there is no contraindication to labor, delivery is indicated and labor should be induced
j. For women between $34^{0/7}$ and $36^{6/7}$ weeks, there are various options regarding plan of care (see below-Principles of Expectant Management)
    i. Latency antibiotics for women between $34^{0/7}$ and $36^{6/7}$ weeks are NOT recommended
    ii. Tocolytics for women between $34^{0/7}$ and $36^{6/7}$ weeks are NOT recommended
k. For PROM < $34^{0/}$ weeks, prophylactic tocolysis during steroid administration may be beneficial in selected cases, but therapeutic tocolysis for women with PPROM who are in active labor is NOT recommended.
l. <u>Special considerations: Periviable (between $20^{0/7}$ and $23^{6/7}$ weeks) or Previable ROM ($20^{0/7}$ weeks)</u>
    i. For previable ROM, please refer to the OB practice protocol on previable PROM. Briefly:
    ii. Women with PROM at a previable gestational age require counseling regarding risks and benefits of expectant management versus immediate delivery due to the maternal health risks of ongoing pregnancy.
    iii. At periviable gestational age, the neonatal team should be called to provide a realistic appraisal of neonatal outcomes in these patients. The earliest gestational age at which the NICU team will offer resuscitative efforts is 22 weeks, 0 days
        1. If patient chooses expectant management and is stable w/o evidence of infection, outpatient surveillance can be considered
        2. Patients can be readmitted to the hospital once the pregnancy reaches a viable gestational age or at the gestational age at which they desire monitoring and intervention.
m. If a patient is stable she can be moved to the antepartum unit for continued expectant management
n. <u>For any evidence of chorioamnionitis or maternal compromise, deliver regardless of gestational age. In the setting of fetal compromise, consider delivery regardless of gestational age</u>

III. Principles of Expectant Management

a. Appropriate for cases of PROM up to $33^{6/7}$ weeks, and possibly beyond after individualized counseling and shared decision-making.
b. Patients managed on the antepartum unit need to be observed for infection, abruption, cord compression, fetal well-being, labor
c. Activity level
    i. Complete pelvic rest
d. Antepartum Surveillance
    i. Routine daily NST's and BPP 2x/week
e. Latency antibiotics as above
f. Corticosteroids – as above
g. Recent literature has suggested possible neonatal benefit with increased risk of maternal morbidity with expectant management of PPROM beyond 34 $^{0/7}$ weeks. If PPROM occurs between $34^{0/7}$ and $36^{6/7}$ weeks or the patient has PROM prior to 34 weeks and subsequently reaches 34 weeks, due to UCMC's high level neonatal care and increased maternal risks with prolongation of pregnancy beyond 34 weeks, our practice has historically been and still remains to offer delivery at 34 weeks gestation. All options below:
    i. Standard of care at UCMC: delivery at 34 weeks
    ii. Delivery after completion of a course of late preterm ANCS, under the following conditions:

1. The patient has not received a course of antenatal steroids already
2. Delivery is not imminent
3. There are no maternal or fetal contraindications such as maternal comorbid conditions (i.e. pre-gestational diabetes, maternal cardiac disease).

iii. Expectant management until:
1. Onset of labor
2. 37 weeks gestation
3. Maternal or fetal status necessitates delivery

IV. Special Considerations

a. Previable PROM < $20^{0/7}$ weeks
i. Please refer to OB Practice Protocol on Previable PROM
ii. Counseling should include a realistic appraisal of neonatal outcomes.
iii. Immediate delivery should be offered
iv. If the patient opts for expectant management and is clinically stable with no evidence of infection, outpatient surveillance can be considered.

b. Periviable PROM $20^{0/7}$ – $23^{6/7}$ weeks
i. Individualized care in conjunction with MFM and NICU consultation
ii. If patient desires intervention in the 22nd week or beyond following neonatal consultation, then individualized therapies for expectant management may be elected.

c. Cerclage-in-situ
i. Insufficient evidence exists regarding the optimal management of a cerclage in patients with PPROM and therefore timing of cerclage removal will be considered based on individualized clinical criteria. Cerclage retention has been associated with prolonged latency, but possibly with increased risk of complications.
ii. In the setting of cerclage, expectant management > 34 weeks is not recommended

d. Herpes Simplex Virus
i. Primary HSV with PROM
1. Initiate antiviral therapy
2. Timing of delivery considerations in consultation with MFM
ii. Recurrent HSV with PROM
1. Initiate antiviral therapy
2. Expectantly manage according to above protocol

e. HIV
i. The management of patients with HIV infection who have preterm PROM should be individualized, with consideration of gestational age, current antiretroviral regimen, compliance with antiretroviral regimen, and viral load.
ii. All cases should be managed in conjunction with infectious disease specialist.
iii. In the setting of HIV, expectant management beyond 34 weeks is not recommended.

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