### SPONTANEOUS RUPTURE OF MEMBRANES IN PREGNANCY

#### DEFINITION

Spontaneous rupture of the chorioamniotic membranes is a natural part of labor and delivery. With such rupture, the woman may notice a gush of fluid or a slow leak of watery vaginal discharge. When rupture precedes the onset of labor, it is called premature (or pre labor) rupture of membranes (PROM) regardless of gestational age. About 8-10% of term pregnancies experience PROM. Prolonged PROM refers to PROM >24 hours. When PROM occurs at term, labor usually starts spontaneously within 12-24 hours, but labor may need to be induced to prevent ascending infection. Preterm (<37 weeks) PROM presents more management challenges. Preterm PROM is the leading identifiable cause of premature birth, accounting for about 20% of perinatal death. Accurate diagnosis and prompt referral for PROM will minimize fetal risk.

#### SUBJECTIVE

Must include:
1. Complaint of gush or slower leakage of fluid from vagina.
2. Document color of fluid lost.

May include:
1. Decreased fetal movement
2. Fever, chills
3. Uterine contractions that began after rupture of membranes.
4. Positive home tests for amniotic fluid
5. Risk factors for premature ROM:
   a. Prior pregnancy with PROM.
   b. Maternal medical problems – chronic steroid use, collagen vascular disorders, anemia, BMI <19.8 kg/m², nutritional deficiencies (copper, vitamin C), tobacco addiction, illicit drug use.
   c. Uterine anomalies: septum, prior cervical conization, shortened cervix (<2.5 cm in 2nd trimester).
   d. Pregnancy complications: vaginal bleeding, preterm labor, polyhyramnios, multi-fetal pregnancy, abdominal trauma.

Must exclude complaints of heavy vaginal bleeding.

#### OBJECTIVE

Must include:
1. Maternal vital signs
2. Fetal heart rate
3. Visual pooling of fluid in vaginal vault or trickle of fluid from os.

(Do Not Perform Speculum Exam If Patient Has Heavy Vaginal Bleeding.) (See Third Trimester Vaginal Bleeding protocol).

May include decreased amniotic fluid volume determined by Leopold’s maneuvers or seen on ultrasound.

#### LABORATORY

Must include at least 1 of the following:
1. Positive nitrazine (pH 7.1 – 7.3).
2. Microscopic ferning seen in cervicovaginal discharge after drying.
3. AmniSure test positive.

#### ASSESSMENT

Spontaneous rupture of amniotic membranes in pregnancy.

#### PLAN

1. Record character and color of amniotic fluid and cervical dilation observed during sterile speculum exam.
2. **DO NOT PERFORM DIGITAL EXAMINATION** if patient has ruptured membranes and is not at prompt risk of delivery.
3. If umbilical cord visible in vagina, elevate fetal head with sterile gloved hand. Maintain fetal head...
### PLAN (Continued)

4. If membranes ruptured in premature (<37 weeks GA) fetus, if the patient reports strong contractions, if there are signs of maternal infection or fetal distress, arrange for transport to hospital (usually ambulance).
5. If membranes rupture at term, but she has no sign of imminent delivery, infection or fetal distress, have patient go to hospital in anticipation of delivery.

### PATIENT EDUCATION

1. Advise all patients with rupture of membranes that they are at increased risk of infection and need hospital care promptly.
2. Women at term should be advised to expect induction of labor if they do not already have uterine contractions.
3. Women with premature pregnancies will be fully assessed and may be given treatment for fetal lungs maturation and/or antibiotics. Pregnancies are usually kept in utero until the risks of continuing the pregnancy outweigh the risk of delivering a premature infant.
4. Assist patient in contacting her family about her impending hospital admission and provide explanations to the family.

### REFER to MD/ER

1. Prolapsed cord or significant cervical dilatation: transport to ER via paramedics.
2. Preterm premature rupture of membranes or fetal demise: transport to ER via ambulance or paramedics.
3. Women with signs or symptoms of infection: ambulance or paramedics.
4. Fetal distress: transport to ER via ambulance or paramedics.
5. All other women at term with ruptured membranes may transport themselves to hospital.

### REFERENCES