Premature Rupture of Membranes (PROM)

Premature rupture of membranes occurs about 4% of the time in premature deliveries. The amniotic sac (membranes often called "the bag of water") is an important structure that surrounds a developing baby and performs many functions. Besides holding the baby in, it keeps infection out. It also plays a part in the turnover and reabsorption of the fluid, mostly from the baby's urine. Additionally, the pressure within this fluid collection sac helps develop the baby's lungs.

Anytime the membranes break (*rupture*) before the beginning of labor it is called "premature rupture of membranes," or PROM. The dangers of premature rupture are infection and premature delivery. Premature delivery increases the risk of poor health and death in newborns. The earlier in the pregnancy that PROM develops the more risk there is to the baby. Normally, a baby is mature about three weeks before the due date (term is 40 weeks). If PROM develops before 37 weeks of the pregnancy, it is called “preterm PROM.”

CAUSES

- History of previous PROM.
- Infection of amniotic fluid, cervix or vagina.
- Smoking.
- Lung disease.
- An excess amount of amniotic fluid.
- Amniocentesis.
- Connective tissue disorders (inflamed tissue around joints) like rheumatoid arthritis and lupus.
- Low socio-economic status.
- Early uterine contractions.
- Second and third trimester bleeding.
- Poor nutrition.
- Total biopsy (*conization*) of the cervix.
- Twins or more babies.
- Too low body weight.
- Unknown causes.

SYMPTOMS

Usually, when the membranes rupture, labor begins shortly after. This is good in a term pregnancy because the baby will be delivered with less chances of having an infection in the mother or in the baby. If the membranes rupture in a term pregnancy and labor does not start by itself, your caregiver will give medicine to start labor. Following the rupture of the membranes, the time is watched closely. This is because as more time passes between the rupture of the membranes and delivery, the greater the chance of serious infection for mother or baby.

DIAGNOSIS

- Being able to see the fluid coming out of the cervix.
- Testing the fluid with a special paper.
- Looking at the fluid under the microscope for ferning (looks like fern leafs).

TREATMENT

The usual methods of handling a pregnancy after PROM include:

- Anyone with PROM should be treated in the hospital.
- If the pregnancy is 37 to 40 weeks along, then labor is artificially started (*induced*) if it does not start by itself. It is desirable to deliver the baby within 24 hours when there is a premature rupture. Delivery lessens the chances of infection. Pelvic exams are also kept to a minimum to decrease chances of infection.
- If the baby is at or near term, and the mother has decided on a repeat C-section, plans can be made to perform a repeat C-section soon after the PROM.
- If a woman comes in with PROM before 32 to 34 weeks (this would be 6 to 8 weeks before term), actions and choices may be conservative. This is because encouraging an early delivery may put a premature infant at more risk in the outside world than inside of the uterus. This is only considered if there are no signs of infection. Infection makes delivery necessary no matter how early the birth may be. Going to the hospital,

bed rest, and antibiotics are given in these situations.

- The time between 32 weeks and 36 weeks is a time period where you and your caregiver will decide on delivery or waiting, and the risks and benefits of both. The more premature the baby is, the greater the risks of delivery. If too young, the baby's lungs may not be mature enough to support life. An amniocentesis may be performed to see if the baby's lungs are mature and ready for delivery. Medicine may be given to prevent labor along with antibiotics to attempt to prevent infection. If delivery can be prevented for 48 hours, there is time for steroids to be given to the mother, which will help to mature (speed up development) of the baby's lungs. This is only useful before 34 weeks and if the baby's lungs are not mature.
- Your caregiver may culture the fluid and cervix to see if there is a Group B streptococcal infection.

Complications can occur in the mother, such as:

- Uterine infection.
- Separation of the placenta (*abruption*) and hemorrhage.
- Retained placenta.
- Post partum hemorrhage.
- Blood infection (*sepsis*).

Complications can occur in the baby, such as:

- Lung and breathing problems (*respiratory distress syndrome*, RDS).
- The baby is lying in an abnormal position like breech or transverse.
- Infection.
- Brain hemorrhage.
- Tissue decay (*necrosis*) of the intestine.
- Prolapse of the umbilical cord.

HOME CARE INSTRUCTIONS

If you had a previous pregnancy with PROM:

- Avoid manual labor and jobs that keep you on your feet for long periods of time.
- You may have to avoid sexual intercourse the last 2 or more months of the pregnancy.
- You may have to stop exercising the last 2 or more months of the pregnancy.
- **Do not** travel out of town the last 2 or more months of the pregnancy.

SEEK IMMEDIATE MEDICAL CARE IF:

- You have a gush or leaking of fluid from your vagina.
- You develop a temperature of 100° F (37.9º C) or higher.
- You notice the baby is not moving as much as usual.
- The umbilical cord comes out of the vagina.
- You develop vaginal bleeding.
- You develop belly (*abdominal*) pain.

There is constant study done to decide the best way to handle PROM. Intensive care units for the newborn allow little ones to survive, which in years past would have been impossible. You and your caregiver will decide on the best way for PROM to be handled.

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