MATERNITY UNIT

GUIDELINE: Pre-labour rupture of the membranes at term

SCOPE: All midwives and obstetricians working in the maternity unit

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PURPOSE: To provide guidance on the appropriate management of PROM in order to reduce the risk of maternal and fetal infections and increase the likelihood of a vaginal birth.

DEFINITIONS:
Labour – the onset of regular, painful contractions along with cervical changes.
Term - from 37 weeks gestation
SROM - Spontaneous rupture of membranes
PROM – Pre-labour rupture of membranes
PPROM – Preterm pre-labour rupture of membranes

GUIDELINE
PROM refers to rupture of fetal membranes before the onset of uterine contractions. Prolonged rupture of membranes is ≥ 18 hours. PROM at term occurs in up to 10% of all pregnancies compared to PPROM which occurs in approximately 3%.

At gestations ≥ 37weeks if labour has not started spontaneously within 24 hours of PROM the recommendation is to induce labour depending on the woman's preference and any other identified risk factors. Spontaneous labour follows term PROM at 24hrs, 48hrs and 96hrs in 70%, 85% and 95% of women, respectively. The woman, LMC and obstetrician should discuss options and risk of management versus waiting.

Risks
The major issue in managing a woman with PROM at term is whether to follow her expectantly or proceed with delivery. Discussion with the woman and the LMC and/or obstetrician should consider the possibility of failed induction of labour (IOL) and caesarean delivery, length of labour, cost and length of hospital stay and the risks and sequelae of maternal and neonatal infection.

Studies have suggested that the risks increase as time progresses with the rates of chorioamnionitis and endometritis being significantly higher after 12 and 16 hours respectively. The risk of PPH increases significantly after 8 hours and the risk of neonatal sepsis increases up to 1.1% after 24 hours; these studies support the immediate induction of labour.

A systematic review of 12 randomised and quasi-randomised trials of women with PROM at ≥ 37 weeks of gestation compared pregnancy outcome with planned intervention versus expectant management. Compared to expectant management, prompt induction of labor was associated

with small reductions in maternal and neonatal infection rates and lower treatment costs, but no increase in caesarean delivery. Other factors to consider are the risks of cord prolapse, cord compression, abruption, and the possibility of rapid delivery outside of the hospital with expectant management.

Assessment and management

The initial evaluation of all pregnancies in which PROM is suspected should be performed by the woman's LMC within the first 12 hours or as soon as possible if there are risk factors for Group B Streptococcus (GBS) or cord prolapse. This should include confirmation of membrane rupture, gestational age and presentation, and assessment of fetal & maternal well-being. If there are any problems with the woman or baby then the obstetrician on call must be notified immediately.

The diagnosis of PROM is based upon a characteristic history (i.e. 'gush' of fluid and subsequent leaking fluid per vagina), physical examination (i.e. visualisation of amniotic fluid flowing from the cervical os or a pool of amniotic fluid in the posterior fornix) or a positive AmniSure test if no pool is seen per vagina but there is evidence of some amniotic fluid.

Initial observations/assessment/documentation should include:

- Maternal temp, pulse, blood pressure and urinalysis;
- Abdominal palpation to assess presentation. If presentation other than cephalic is suspected, refer to obstetrician;
- Fetal heart rate by CTG;
- **Do not perform a digital vaginal examination** unless the woman is in labour, or immediate induction of labour is planned;
- Ask the woman to lie on her side for 20-30 minutes prior to performing a sterile speculum examination to look for a pool of liquor in the posterior vaginal fornix or draining through the cervical os. Take a High Vaginal Swab if expectant management is planned;
- If in doubt, confirm PROM using positive AmniSure test (follow directions on the packet). A speculum is not required for this test, but it is essential that the instructions are followed diligently in order to obtain accurate results;
- The NZ guidelines recommend consultation with the obstetrician by 24 hours. However, when a woman is known to be at high risk, it is recommended to consult with the obstetrician by 12 hours or earlier to consider initiation of antibiotics and/or induction of labour sooner to prevent transfer of GBS to the baby. Please refer to 'The prevention of neonatal Group B Streptococcal infection' guideline.

Expectant management in the community

It is recommended that the LMC assess the woman in person to determine whether or not she can be safely managed expectantly in the community. If there are no contraindications and the risks and benefits of expectant versus IOL have been explained to the woman who meets the following criteria, they may be managed expectantly as outpatients:

- >37 weeks gestation;
- Singleton fetus;
- Cephalic presentation, engaged;
- Clear liquor – woman to monitor amount, colour, consistency 4 hourly and report changes;
- Normal fetal movements (advise the woman to report any decrease in movements);
- Afebrile – woman is to record temperature 4 hourly and report any fever;
- No GBS risk factors;
- Pulse <100
- An uncomplicated pregnancy.
- Has immediate access to a phone.
- Lives less than 40 minutes away from hospital.
- Able to get transport to and from the hospital easily.
- Has NOT had a digital examination.

If all parameters remain normal the woman may remain at home until established labour. She should be informed that taking a shower or bath does not increase the risk of infection, but sexual intercourse may, so to avoid this.

Expectant Management
If the woman chooses expectant management, she will need to be assessed by an obstetrician if she does not establish in labour **within 24 hours** or if any of the following occur:

- There is any evidence of meconium staining of the liquor;
- There is heavily blood stained liquor;
- Malpresentation;
- Decreased fetal movements – advise the woman to contact her LMC immediately if this occurs;
- Any evidence of infection.

IOL
The management plan for induction is to be discussed with the woman, her LMC, the core midwife and the obstetrician and clearly documented in her records & an IOL care plan commenced. A discussion should take place regarding ongoing midwifery care responsibilities, as per NZCOM referral guidelines. Women who do not birth before 18 hours following ROM have developed a

risk factor for GBS and require prophylactic intrapartum IV antibiotics once in active labour aiming for at least four hours between first antibiotics dose and birth.

It may be preferable to induce labour with oxytocin rather than prostaglandins, even if the cervix is unfavourable, as it is easier to titrate and the use of any prostaglandins has been associated with an increased risk of chorioamnionitis. Please refer to the syntocinon guideline. One study however did show a significantly increased rate of vaginal delivery within 24 hours in women with a Bishop score of <5 where prostaglandins were used compared to those induced with oxytocin alone. The maternal observations including 4 hourly temperature should be recorded throughout labour and the intrapartum fever guideline referred to for any maternal temperature ≥ 38 degrees Celsius.

Women may choose not to accept induction of labour at 24 hours post rupture of membranes. These women should be counselled about the increased risk of infection, and advised that she should deliver at a secondary/tertiary unit with neonatal services. She should continue to monitor herself per the above home guidelines and fetal heart rate should be assess every 24 hours by her LMC. If induction of labour is not requested by 72 hours post rupture of membranes, the woman should be again referred for review by an obstetrician for further discussion and plan of care.

Postnatal care

The baby will need to be monitored as per GBS guideline if the membranes were ruptured over 18 hours prior to the birth. However, if appropriate intravenous antibiotic cover was commenced ≥ 4 hours prior to the birth, the monitoring may be done at home, though it is recommended that the baby is observed in hospital for at least 12 hours post birth. All newborn babies showing signs of sepsis should undergo immediate referral to the paediatrician for assessment. Please ensure the neonatal care plan is completed.

ASSOCIATED DOCUMENTS

Maternity Unit guideline: Induction of labour
Maternity Unit guideline: The prevention of neonatal Group B Streptococcal infection
Maternity Unit guideline: Intrapartum Fever
Maternity Unit guideline: Syntocinon intravenous infusion for induction or augmentation of labour

REFERENCES

Maternity Services – *Notice Pursuant to Section 88 of the New Zealand Public Health and Disability Act 2000.* 1 July 2007

MOH (2012) Guidelines for Consultation with Obstetric and Related Medical Services (Referral Guidelines). Wellington: MOH

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National Institute of Clinical Excellence (NHS UK) (2014) NICE clinical guideline number 55: Intrapartum care: Care of healthy women and their babies during childbirth 1.11 Prelabour rupture of the membranes at term. Retrieved from https://www.nice.org.uk/guidance/cg190/resources/intrapartum-care-for-healthy-women-and-babies-pdf-35109866447557

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Auckland DHB Rupture of Membranes in Pregnancy guideline (19/11/2015) https://nationalwomenshealth.adhb.govt.nz/assets/Womens-health/Documents/Policies-and-guidelines/Rupture-of-Membranes-in-Pregnancy.pdf

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