Pre-term, pre-labour rupture of the membranes (PPRoM) guideline (GL895)

Approval

<table>
<thead>
<tr>
<th>Approval Group</th>
<th>Job Title, Chair of Committee</th>
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<tr>
<td>Maternity &amp; Childrens Services Clinical Governance Committee</td>
<td>Chair, Maternity Clinical Governance Committee</td>
<td>5th April 2019</td>
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Change History

<table>
<thead>
<tr>
<th>Version</th>
<th>Date</th>
<th>Author, job title</th>
<th>Reason</th>
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<tr>
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Overview: A good history, examination and clear documentation is essential for diagnosing and managing preterm rupture of membranes (PPRoM). Antibiotics have been shown to reduce fetal and maternal morbidity in PPRoM.

1. Assessment:
- Maternity vital signs of pulse, blood pressure, temperature, respiratory rate and MOWS calculation
- Confirm dates by LMP and previous scans
- History and abdominal examination to include ultrasound scan to check presentation.
- Sterile speculum and HVS (try to avoid digital examinations due to increased infection and release of prostaglandins, which may stimulate the process)
- Urinalysis including C&S
- CTG (from 28 weeks)

2. Infection:
Infection may both cause and complicate rupture of the membranes. It is important to try to confirm the diagnosis by history; examination and ultrasound scan in order that appropriate management may be carried out. Good documentation of these findings is thus also essential.
- An aseptic speculum examination should be performed to confirm the diagnosis and examine the cervix and exclude cord prolapse
- If an obvious poll of liquor is not visible, and the mother reports fluid loss with the last 12 hours, an AmniSure test should be performed
- A low vaginal swab should be sent for culture and sensitivity
- A digital vaginal examination should not be performed ‘routinely’ unless the mother is contracting
- An ultrasound may be performed to assess liquor volume, confirm presentation and estimate fetal weight
- Bloods for FBC and CRP for baseline results
- The duty obstetrician should be informed

If there are signs of sepsis, intravenous antibiotics should be given within one hour and a septic screen performed (see antibiotic guideline). Delivery should be expedited if appropriate. If there are no overt signs of infection, oral antibiotics should be given for 7 days.
3. **Antibiotic Regime for PPRoM:**

Amoxicillin 1g three times a day for 7 days

If allergic or unable to tolerate:

PO azithromycin 500mg 24 hourly for 7 days

See also *Antibiotic treatment & prophylaxis guidelines for Obstetrics (GL787)*

For all mothers, consider these points as shown in the charts:

- gestation to consider in utero transfer
- magnesium sulphate administration for neonatal neuro-protection
- maternal steroid administration to facilitate the fetal production of surfactant
- and possible role of tocolysis (although this is NOT ROUTINELY administered to mothers booked at Reading who are not being transferred elsewhere for delivery)

4. **In utero Transfer: see Appendix 1**

If the woman has confirmed PPROM and if she is less than 27 weeks into her pregnancy (if singleton) or less than 28 weeks (if twins), she should be advised that an in-utero transfer would be arranged to level 3 NICU (unless she has severe sepsis/ has signs of imminent delivery/ delivery expected in 3-4 hours of assessment).

Please look at the *In-utero transfer protocol (CG508)*.

5. **Admission**

If mother is above 27 weeks (in singleton) or above 28 weeks (in twins), she should be admitted for observation for 48-72 hours. During the first 48-72 hours, the following care should be provided:

- 4 hourly maternal pulse, temperature and respiratory rate and MOWS calculation should be performed and recorded on the in-patient observation chart.
- Daily observation of liquor
- CTG if maternal observations suggest developing systemic infection, or if there is uterine activity
- Steroid administration

If presentation is cephalic (must be confirmed by US examination), and swabs/MSU show no growth and CTG’s are reassuring, she may be discharged and managed as an outpatient until labour occurs or induction planned.
6. **Once 72 hours have passed since PPRoM has been confirmed:**

All women should be advised of the signs of chorioamnionitis and asked to observe their loss and monitor their temperature at home on a regular basis (at least twice a day). A patient information leaflet ‘premature, pre-labour rupture of membranes (PPROM)’ should also be given.

Ultrasound scans may be performed weekly for assessing liquor volume for those at risk of developing fetal pulmonary hypoplasia (SROM <24 weeks).

Vaginal intercourse should be avoided if possible.

The woman should be seen weekly in DAU for bloods including FBC & CRP and a vaginal swab and have a scan fortnightly to check liquor and growth with scan review by the registrar or consultant on DAU. A consultant appointment should be made for ANC at 34 weeks to discuss and confirm the plan for delivery including gestation (between 36-37 weeks) and mode of delivery.

The woman should contact the Triage midwife by phone, and return to the maternity unit if she feels unwell, liquor colour changes, contractions start, there is a reduction in fetal movements, or a temperature develops.

Please note that the passage of green liquor is unlikely to be meconium at gestations of less than 36 weeks. It may indicate presence of infection (most cases), or can be from altered blood or even bile (less likely). The duty obstetrician should be informed if green liquor is present and a septic screen performed. The case should be discussed with the obstetric consultant on call.

7. **Delivery:**

Delivery is indicated if there are objective signs of maternal or fetal infection. The route and timing will depend on the clinical situation.

There should be no promise to deliver by any particular gestation in the absence of clinical indications for early delivery, although the [Green-top Guideline No. 73 Care of Women Presenting with Suspected Preterm Pre-labour Rupture of Membranes from 24+0 Weeks of Gestation](https://www.green-top.org.uk/green-top-guidelines/) advises that delivery should be considered at 34 weeks but the risk of neonatal respiratory problems should be balanced against the risk of chorioamnionitis.

In labour, continuous monitoring is recommended and IV antibiotics (Benzylpenicillin) should be given. Blood should be sent for FBC and G+S as there is a risk of PPH especially in the presence of infection.
8. **References:**

1. Preterm labour and birth NICE guideline [NG25] Published date: November 2015
Appendix 1 - Algorithm for Management of Preterm Prelabour Spontaneous Rupture of Membranes V2.2 (Updated Jan 2020)

Authors: Mr Lawrence Impey, Oxford AHSN Maternity Clinical Lead

Suspected preterm prelabour SROM at ≥ 22+3 to <34+0

- Acute fetal compromise
- or
- Maternal compromise/
or
- Placental abruption

- Chorioamnionitis
- IV antibiotics
- Sepsis care bundle
- Steroids
  - Mg if <32+0
  - EFW if poss
- VE

- Contracting + / - minor bleed
- Steroids
- Mg if <32+0
- EFW if poss
- IV antibiotics

- Not contracting +/- minor PVB, but likely SROM/POC +ve
- Steroids
- No Mg
- EFW if poss
- Erythromycin po

- Likely not SROM / POC -ve
- Consider no steroids
- No Mg
- Non-urgent USS
- No antibiotics

- Gestation is <27+0 (singleton) OR <28+0 (multiple) OR EFW <800g (incl if <25+0 or EFW <600g IF parents want active management)

- Deliver , or
- Consider IUT if situtation stabilised

- No tocolysis
- Consider tocolysis for IUT only

- Request IUT if del unlikely <1hr
- Request IUT if del unlikely <1hr
- Request IUT

- No tocolysis
- No tocolysis
- Consider discharge
### Footnotes:

1. Dates according to CRL excl in IVF pregnancies. Note this gestation has been modified following new BAPM Guidelines. Active resuscitation for neonates <23+0 will be offered if there are good prognostic features (eg >/=22+3, had steroids, delivery in Level 3). incl >/=22+3). If there is uncertainty about the circumstances or the dates, call obstetric consultant at OUH.

2. CTG to be used only >/=26+0 weeks

3. Chorioamnionitis is very common at presentation of severely preterm SROM and may be subtle. Early IVABs (<1hr of diagnosis), see local sepsis guideline. Confirmed chorioamnionitis requires delivery, but this can usually be after transfer, if IUT criteria are met.

4. POC: point of care test for SROM (e.g. Actim PROM).

5. IV antibiotics. Follow unit antibiotic guideline; avoid co-amoxiclav

6. Mg: Magnesium bolus 4g (16mmol) Magnesium Sulphate as 20mls of 20% magnesium sulphate IV over 5 – 10 minutes. If <32+0 weeks. Note PReCePT suggests 30 but clinical benefit up to 32 weeks.

7. EFW: estimated fetal weight +/-15% if possible

8. Stabilisation of acutely unwell mother beyond scope of this. Early IVABs (<1hr of diagnosis) essential, see local sepsis guideline.

9. Criteria for delivery in Level 3 Neonatal Unit. If criteria not met follow local guideline

10. If time, offer discussion with paediatrician. Document any discussion regarding IUT with parents. Consider providing Thames Valley Neonatal Network patient information leaflets if available.

11. IUT: in utero transfer, try OUH first. 8-5pm call Delivery Suite (01865 221988/7), and specifically request to speak to the consultant obstetrician on Delivery Ward. From 5pm to 8am, hospital switchboard (01865 741166), with the request to speak to the obstetric consultant on call. DO NOT call neonatal unit or delivery ward manager first.

12. Tocolysis. Follow unit tocolysis guideline. Do not use nifedipine if magnesium given or to be given