Aneurin Bevan University Health Board

Management of spontaneous preterm pre-labour rupture of membranes <34 weeks gestation (PPROM)

N.B. Staff should be discouraged from printing this document. This is to avoid the risk of out of date printed versions of the document. The Intranet should be referred to for the current version of the document.

Owner: Maternity Services

Contents:

Introduction

A woman is described as having Preterm pre-labour rupture of membranes (PPROM) if she has ruptured membranes before 37+0 weeks of pregnancy but is not in established labour. PPROM complicates up to 3% of pregnancies and is associated with 30-40% of preterm births. PPROM can result in significant neonatal morbidity and mortality as well as complications for the mother. Some consequences include sepsis, cord prolapse, pulmonary hypoplasia, chorioamnionitis and placental abruption.

Policy Statement

This guidance has been developed to support standard 2.1 of the "Standard for Health Services Wales".

Aims

To assist clinicians to diagnose, investigate and manage preterm prelabour rupture of membranes. Thus, reducing the associated morbidity and mortality to both women and neonates.

Objectives

Best management recommendations in order to reduce morbidity and mortality associated with PPROM.

Scope

- This document is to be utilised by the obstetric and midwifery teams within the Maternity Unit in Aneurin Bevan Health Board.

Roles and Responsibilities

- Medical and Midwifery staff will be required to implement this guideline.

Key of abbreviations

PPROM	Prolonged premature rupture of membranes
CTG	Cardiotocography
FBC	Full blood count

G+S	Group and save
CRP	C-reactive protein
HVS	High vaginal swab
USS	Ultrasound sonography
SCBU	Special care baby unit
DAU	Day assessment unit

Diagnosis of PPROM

- Best achieved by maternal history followed by a sterile speculum where evidence of liquor pooling (considered Gold Standard).
- If pooling of amniotic fluid is observed, a diagnosis of PPROM can be made. Diagnostic tests are not required.
- Digital vaginal examination to be avoided unless there is strong clinical suspicion of labour.
- If the clinical assessment suggests that the patient is in labour, and they are 29+6 weeks or less advise treatment for preterm labour as per NICE guidelines on tocolysis and maternal corticosteroids[1].
- If pooling of amniotic fluid is not observed, consider performing an insulin-like growth factor binding protein-1 test or placental alpha-micoglobulin-1 test of vaginal fluid such as ROM plus + test. These tests should be undertaken before a digital vaginal examination.
- Do not make a diagnosis of PPROM with diagnostic tests in isolation, clinical history and examination should be taken into account.
- Do not perform diagnostic tests for PPROM if labour becomes established in a woman reporting symptoms suggestive of PPROM.
- If diagnostic tests are positive take into account her clinical condition, her medical and pregnancy history and gestational age. Then either:
- Offer care consistent with the woman having PPROM
- Alternatively re-evaluate the woman's diagnostic status at a later point.
- If diagnostic tests are negative and no amniotic fluid is observed, then explain PPROM is unlikely but that they should return if they have further symptoms suggestive of PPROM or preterm labour.

Antenatal tests

- Women should have baseline observations and a CTG taken on admission (BP, temperature, pulse, respiratory rate)
- Clinical signs of chorioamnionitis must be checked and documented.
- Signs and symptoms may include maternal pyrexia, tachycardia, leucocytosis, uterine tenderness, offensive vaginal discharge and fetal tachycardia
- Blood tests including a FBC, CRP and G+S should be taken if there is a positive diagnosis of PPROM made
- A HVS should be taken if a positive diagnosis of PPROM is made at the time of examination.
- When identifying infection, the above tests and examination findings should be used in combination and not isolation.
- Discussion with labour ward and SCBU if imminent labour/chorioamnionitis is suspected for further management plan

Inpatient Management

- Admit for up to 48 hours for observation
- 4 hourly observations.
- Commence oral Erythromycin 250 mg QDS for 10 days
- Oral penicillin "Phenoxymethylpenicillin 250mg 6 hourly x 10 days" of can be used as an alternative where Erythromycin is contraindicated
- In women who have PPROM and are in established labour or having a planned preterm birth within 24 hours, intravenous magnesium sulphate should be offered between 24+0- and 29+6-weeks' gestation.
- Magnesium sulphate should be considered if birth is anticipated between 30 and 33+6 weeks
- Tocolytics are not recommended with PPROM in isolation

Maternal Corticosteroids

- For women between 23+0 and 23+6 weeks, discuss with the woman the use of maternal corticosteroids in the context of her individual circumstances.
- Consider maternal corticosteroids for women between 24+0 and 25+6 weeks.
- Offer maternal corticosteroids to women between 26+0 and 33+6 weeks.
- Consider maternal corticosteroids for women between 34+0 and 35+6 weeks.
- Discussion should be undertaken after 34+0 with potential complications for the infant in regard to a possible link with delays in reaching milestones and educational achievements.

- Administer steroid (Betamethasone 12mg x 2 doses with 24-hour interval OR Dexamethasone 6mg 6 hours apart x 4 doses)
- If accelerated steroid dose indicated when delivery is required, administer Betamethasone 12 mg at 12-hour interval.
- If imminent labour is suspected, tocolysis (nifedipine 20 mg, PO, QDS for a maximum of 24 hours) may be given in order to administer steroid course or for intra uterine transfer.
- Discussion by neonatologist with patient to discuss prognosis.

Outpatient Monitoring

- Discharge should be by undertaken by a Registrar or Consultant after initial assessment and steroids completed if indicated
- Weekly DAU assessment should be undertaken for clinical assessment including review of symptoms for infection.
- When GBS colonisation is unknown, bacteriological testing is not recommended, however intrapartum antibiotic cover should be offered during labour.
- The care of women with PPROM who are known to be colonised with group B streptococcus, the risk of preterm delivery at less than 34/40 are likely to outweigh the risk of perinatal infection. For those at 34+/40 it may be beneficial to expedite delivery.
- USS growth can be every 2 weeks with weekly liquor volume and dopplers undertaken as is common practice, however Cochrane review of 3 RCT's found limited evidence of improving outcomes.
- Delivery to be considered after 34 weeks of gestation after discussion with their consultant.
- Women whose pregnancy is complicated by PPROM after 24+0 weeks' gestation and who have no contraindications to continuing the pregnancy should be offered expectant management until 37+0 weeks; timing of birth should be discussed with each woman on an individual basis with careful consideration of patient preference and ongoing clinical assessment.

Training

- Medical staff and midwifery advanced clinical practitioners assessing women with PPROM should be appropriately trained to perform speculum examinations.
- USS should be performed by a competent USS trained operator
- Training needs will be identified through appraisal and clinical supervision.

Implementation

- This document will be available on the intranet for access by medical and midwifery staff

Further Information Clinical Documents

Green top guidelines No 73-Preterm prelabour rupture of membranes

Standards for Health Services Wales

http://www.wales.nhs.uk/governance-emanual/theme-2-safecare-criteria

Equality

No. Equality is not affected by this guideline

Environmental Impact

- N/A

Audit

- Proportion of women with PPROM who are offered antibiotics for 10 days following PPROM, or until the woman is in established labour.
- Proportion of women who experience PPROM between 24+0 and 33+6 weeks of gestation who are offered corticosteroids
- Proportion of women less than 30+0 weeks' gestation who receive magnesium sulphate within 24 hours prior to birth
- Proportion of women with PPROM who are given the opportunity to discuss their care with a neonatologist

Review of Guidelines

3 years

References

1 NICE guideline NG 25. Preterm labour and birth. November 2015, updated June 2022. Preterm labour and birth (nice.org.uk)

2 Green-top guidelines No. 73 Preterm Pre-labour Rupture of membranes, June 2019. Care of Women Presenting with Suspected Preterm Prelabour Rupture of Membranes from 24+0 Weeks of Gestation - Thomson - 2019 - BJOG: An International Journal of Obstetrics & Gynaecology - Wiley Online Library

3 Standards for Health Services in Wales, Doing well, doing Better Dec 2012. *http://www.wales.nhs.uk/governance-emanual/theme-2safe-care-criteria*

4 Sharp GC, Stock SJ, Norman JE. Fetal assessment methods for improving neonatal and maternal outcomes in preterm prelabour rupture of membranes. Cochrane Database Syst Rev 2014;: CD010209

5 Green top guideline No 36 Prevention of Early onset Group B Streptococcal Disease, September 2017. Prevention of Early-onset Neonatal Group B Streptococcal Disease - 2017 - BJOG: An International Journal of Obstetrics & Gynaecology - Wiley Online Library