Preterm prelabour rupture of membranes (PPROM)

Clinical Guideline Presentation v3.0

45 minutes

Towards CPD Hours

References:

Queensland Clinical Guideline: Preterm prelabour rupture of membranes is the primary reference for this package.

Recommended citation:

Queensland Clinical Guidelines. Preterm prelabour rupture of membranes clinical guideline education presentation E23.48-1-V3-R28. Queensland Health 2023.

Disclaimer:

This presentation is an implementation tool and should be used in conjunction with the published guideline. This information does not supersede or replace the guideline. Consult the guideline for further information and references.

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Abbreviations

APH	Antepartum haemorrhage
CRP	C-reactive protein
CTG	Cardiotocograph
GBS	Group B *Streptococcus*
HVS	High vaginal swab
IV	Intravenous
MC&S	Microscopy, culture and sensitivity
MSU	Mid-stream urine
PPROM	Preterm prelabour rupture of membranes

Objectives

- Identify management options following PPROM
- Identify risks and benefits of management options

Preterm PROM

What is PPROM?

PPROM refers to women who:

- Have ruptured membranes
- Are less than 37+0 weeks gestation
- Are not in labour

Preterm

Prelabour

Rupture

Of

Membranes

- Occurs in around 3% of pregnancies
- Responsible for 30% of preterm births
- 56% go into labour within one week
- 76% go into labour within two weeks
- 86% go into labour within three weeks

Diagnosis

Avoid digital vaginal examinations as may increase risk of infection

How is the diagnosis of PPROM made?

- History:
  - Sudden gush or continued leakage of fluid from vagina
- Sterile speculum:
  - Pooling of amniotic fluid or leakage from cervical os with coughing
- Test vaginal secretions:
  - Immunoassay (e.g. Amnisure®)
  - pH stick (e.g. Nitrazine)

Conduct a clinical assessment

- Review history
- Maternal vital signs
- General physical exam
- Abdominal palpation
- Fetal heart rate/CTG (based on gestational age
- Assess vaginal loss on pad

During sterile speculum exam

- Exclude cord prolapse
- Visualise cervical length and dilatation
- If ongoing uncertainty of diagnosis, test vaginal secretions
- Consider HVS swab for MC&S and GBS (if not already obtained)

Initial assessment

Isla is 33 weeks pregnant with her first baby. She thinks her 'waters have broken'. After clinical assessment you confirm PPROM. She is otherwise well.

What additional investigations will you recommend?

- Routine antenatal bloods not already collected
- Full blood count +/- baseline CRP
- Dipstick urinalysis MSU for MC&S
- Swabs for GBS (may be self-collected)
- With sterile speculum collect high vaginal swab
- Ultrasound for fetal wellbeing and to confirm presentation

Aim of care

Maximise benefits of increasing fetal maturity in-utero while minimising potential risks

CRP

Conflicting evidence about usefulness in PPROM—may be a useful adjunct to exclude infection

Antibiotics

Isla asks whether she should have antibiotics.

Are antibiotics recommended?

Yes. Antibiotics are known to prolong latency and reduce maternal and fetal infection following PPROM

Avoid

Amoxicillin/clavulanic acid are associated with increased risk of necrotising enterocolitis in baby

Recommend

- Amoxicillin/ampicillin 2 g IV every 6 hours for 48 hours, followed by amoxicillin 250 mg oral every 8 hours for a total of 7 days (IV and oral) or until birth (whichever is sooner), **PLUS** erythromycin 250 mg oral every 6 hours for 7 days or until birth (whichever is sooner)
- If history of penicillin hypersensitivity consider referral to an infectious diseases clinician and the *Therapeutic Guidelines* Prophylaxis for PPROM

Inpatient care

You recommend Isla be admitted to hospital for 72 hours for assessment and monitoring.

In addition to monitoring for infection, what care will you give Isla?

- Counsel about prematurity
- Involve neonatologist/paediatrician in care planning
- Offer psychological support
- Involve other members of the multidisciplinary team relevant to circumstances (e.g. social worker, maternal fetal medicine specialist, Aboriginal and Torres Strait Islander health worker)

Self care advice

- Advise about the risk of infection
- Personal hygiene—change pad four hourly (or more frequently)
- Wipe front to back after toileting
- Showering in preference to baths
- Avoiding tampon use, vaginal creams/medications, vaginal intercourse, immersion in water (e.g. swimming, bathing, spa)
- Attend all review appointments

Risk of infection

Isla asks about the risk of infection and asks how she will know if she gets one?

What advice do you give Isla?

- The risk of infection is increased after PPROM
- Report any concerns
- Self-monitor for signs of infection and contact healthcare provider immediately
- Follow self-care advice
- Attend all appointments (if discharged)

Signs of infection

- Feeling unwell or flu-like symptoms
- Maternal temperature greater than 37.5 ^{o}C
- Change in vaginal discharge (odour, volume, amount, colour)
- Uterine tenderness
- Fetal tachycardia
- Change in fetal movements

Outcomes

Isla asks about the risks and benefits of planned birth if she were to have her baby now.

What can you tell Isla about planned birth at 33 weeks after PPROM?

No difference in:

- Chorioamnionitis
- Caesarean section
- Neonatal infection

Decreased

- Endometritis

If PPROM, after 34 weeks with any planned birth versus expectant care:

Decreased

- Chorioamnionitis
- APH

Increased

- Respiratory distress

Birth

Isla asks when is the best time to have her baby.

What can you tell Isla about this?

- Optimal time is unknown
- Individual circumstances will determine timing
- Dependent on ongoing health and wellbeing of mother and baby
- Generally, less than 34 weeks favours waiting

If preterm birth:

- Antenatal corticosteroids
- Magnesium sulfate for neuroprotection if under 30 weeks
- In-utero transfer if limited service capacity
- Recommend intrapartum GBS prophylaxis