HEALTH HOLDING
HAFER ALBATIN HEALTH CLUSTER
MATERNITY AND CHILDREN HOSPITAL

Department:	Obstetrics and Gynecology		
Document:	Multidisciplinary Policy and Procedure		
Title:	Management of Premature Rupture of Membranes (PROM)		
Applies To:	All Obstetrics and Gynecology Staff		
Preparation Date:	January 08, 2025	**Index No:**	L&D–MPP–018
Approval Date:	January 22 2025	**Version :**	2
Effective Date:	February 22, 2025	**Replacement No.:**	L&D–MPP–018(1)
Review Date:	February 22 2028	**No. of Pages:**	7

1. PURPOSE:

1.1 To defines the department policy regarding management of cases of PROM.

2. DEFINITIONS:

2.1 **PROM**– Premature ruptures of membranes.
2.2 **Preterm PROM**– Rupture of the membranes prior to term (37 weeks) in the absence of regular uterine contractions.
2.3 **Term PROM**–Rupture of the membranes prior to the onset of labor, after 37 weeks.
2.4 **Prolonged PROM**– Rupture of the membranes for more than 24 hours in a term fetus.

3. POLICY:

3.1 History of gush of fluid followed by persistent uncountable leakage.
3.2 Use of sterile speculum examination, notes:
  3.2.1 Color of amniotic fluid pooling in the posterior fornix of vagina.
  3.2.2 Presence of umbilical cord.
  3.2.3 Estimate cervical assessment and dilatation.
  3.2.4 Take endocervical swab.
3.3 Digital examination must be avoided unless the woman is thought to be in established labor.
3.4 Palpate the abdomen to determine fundo–symphysical height. Check the presenting part and FHR.
3.5 Ultrasound:
  3.5.1 To confirm diminished liquor volume.
  3.5.2 To check presentation and gestational age.
  3.5.3 In case of breech, check EFW.
3.6. Cases of PROM considered as high risk cases and management should be discussed with senior registrar on call.
3.7 Management depends essentially upon weighing the pros and cons of delivery against expectant management.
3.8 Counseling the patient is quite essential in the plan of management.
3.9 Efforts should be made to know the cause behind PROM if this is possible.
3.10 When PROM occurs in the presence of cervical Cerclage, suture removal should be considered.
3.11 Preterm PROM cases are managed conservatively unless otherwise indicated.
3.12 Antibiotics should be administered to patients with preterm PROM because they prolonged the latent period and improve outcomes.
3.13 Corticosteroid should be given to patients with preterm PROM between 24 and 34 weeks gestation to decrease the risk of intraventricular hemorrhage, respiratory distress syndrome, and necrotizing enterocolitis.
3.14 Physician should not perform digital cervical examinations on patients with preterm PROM because they decrease the latent period. Speculum examination is preferred.
3.15 Long term tocolysis is not indicated for patients with preterm PROM, although short term tocolysis may be considered to facilitate maternal transport and the administration of corticosteroid and antibiotics.

3.16 Multiple courses of corticosteroid and the use of corticosteroid after 34 weeks gestation are not recommended.

4. PROCEDURE:

4.1 Upon arrival to labor ward:

4.1.1 Do clinical assessment to approach the diagnosis.

4.1.1.1 Review the history (History of gush of fluid, followed by persistent uncountable leakage), review patient's chart, and look for gestational age and risk factors.

4.1.1.2 Do general examinations, check vital signs, abdominal examination, and look for signs of chorioamnionitis.

4.1.1.3 Use sterile speculum examination to:

4.1.1.3.1 Assess color of amniotic fluid pooling in the posterior fornix of vagina.

4.1.1.3.2 Assess presence of umbilical cord.

4.1.1.3.3 Assess cervical dilatation.

4.1.1.3.4 Take endocervical swab.

4.1.1.4 Use Nitrazine paper: Nitrazine paper will turn blue when the pH is above 6.0 however, the presence of contaminating substances (e.g. blood, semen, alkaline antiseptic) also can cause nitrazine paper to turn blue, giving a false–positive.

4.1.1.5 Check for ferning (arborization) under a low-power microscope. The presence of ferning indicates PROM it is important to note that vaginal blood may obscure the presence of ferns.

4.1.1.6 AmniSure: is a point of care immunochromatographic assay that detects trace amounts of placental alpha macroglobulin–1 protein (PAMG–1) in vaginal fluid rupture of fetal membranes.

4.1.1.6.1 AmniSure assay does not require a speculum examination.

4.1.1.6.2 A sterile swab is inserted into the vagina for one minute and then placed into a vial containing a solvent that extracts protein from swab. After one minute, an AmniSure test strip is dipped into the vial.

4.1.1.6.3 The pad region of the test strip contains soluble murine monoclonal antibody to PAMG–1 that is conjugated with colloidal gold particles. These antibodies bind to PAMG–1, if it is present. The antigen-antibody complex migrates to the test region of the strip which contains solid phase rabbit anti–mouse antibody that captures PAMG–1 antibody complexes flowing up from the Pad Region.

4.1.1.6.4 After five to ten minutes, immobilized colloidal gold conjugated PAMG–1 produces a brown/yellow stripe in the test region. A second stripe in the control region indicates that the test strip functioned properly.

4.1.1.6.5 This stripe appears when rabbit anti-mouse IgG antibody catches the mouse A–antibody with dye gold. One visible line means a negative result for amniotic fluid, two visible lines is a positive result, no visible lines is an invalid result).

4.1.1.6.6 Do ultrasound:

4.1.1.6.6.1 To confirm diminishes liquor volume.

4.1.1.6.6.2 To check presentation and gestational age.

4.1.1.6.6.3 In case of breech, check EFW.

4.1.2 Apply CTG.

4.2 Observe the woman for signs of chorioamnionitis:

4.2.1 Maternal pyrexia > 37.8 ^{0}C.

4.2.2 Maternal Tachycardia.

4.2.3 Uterine tenderness.

4.2.4 Offensive vaginal discharge.

4.2.5 Leukocytosis.

4.2.6 Fetal Tachycardia> 160 bpm.

4.3 Extract blood for CBC, CRP, repeat it weekly with HVS.

4.4 Management: (see the table).

4.4.1 Term PROM: > 37 weeks.

4.4.1.1 Start penicillin, 5 million units IV stat does then 2.5 million units 6 hourly or Erythromycin 500mg q6 hrs. till delivery for patient with:
- 4.4.1.1.1 PROM more than 18 hour.
- 4.4.1.1.2 GBS positive.
- 4.4.1.1.3 History of affected infant with GBS.
- 4.4.1.1.4 History of GBS bacteriuria in current pregnancy.
- 4.4.1.1.5 Fever >38 ^{0}C.

4.4.1.2 Patient should be offered immediate IOL or Expectant management which should not exceed 48 hours following membrane rupture.

4.4.1.3 I.O.L. is recommended as early as admission to the hospital preferably by oxytocin. However PGE2 could be used for Unfavorable cervix.

4.4.2 Preterm PRROM (34–36 weeks).
- 4.4.2.1 Keep the patients for 12–24 hours in the labor ward aiming at spontaneous onset of labor.
- 4.4.2.2 If labor pains did not start spontaneously for I.O.L (either by PGE2 or oxytocin according to the Bishop score).
- 4.4.2.3 Start IV Ampicillin 1gm/ 6 hourly / IV or Erythromycin base 250mg/ 6 hours/IV.
- 4.4.2.4 Labor may be induced earlier if there is meconium or the CTG is non-reassuring.

4.4.3 Preterm PROM: (< 34 weeks)
- 4.4.3.1 Antibiotic:
  - 4.4.2.1.1 Ampicillin 2g IV/ 6 hours plus Azithromycin 1G oral stat or erythromycin base 250mg IV 6 hourly for 48 hours.
  - 4.4.2.1.2 Then amoxicillin 500mg/ 8 hourly plus erythromycin 250mg / 6 hourly both orally for 5 days.
- 4.4.3.2 Steroids:
  - 4.4.2.2.1 To be given from 24 weeks to 34 weeks.
  - 4.4.2.2.2 To be given if the patient is in labor.
  - 4.4.2.2.3 Refer to P&P management of PTL.
- 4.4.3.3 Tocolytics:
  - 4.4.2.3.1 Only if the patient is having labor pains who require:
  - 4.4.2.3.2 Intrauterine transfer.
  - 4.4.2.3.3 Steroids to work.

4.4.4 Shift the patient to the ward after 12 hours of observation in labor ward:
- 4.4.4.1 Use PROM chart to monitor the fetal and maternal condition.

4.4.5 PROM with Chorioamnionitis:
- 4.4.5.1 Inform Physician.
- 4.4.5.2 Triple antibiotics IV: Ampicillin, Flagyl, Gentamycin.
- 4.4.5.3 Another combination: Ampicillin 2gm IV 6 hourly plus Gentamycin 80mg 8 hourly plus Flagyl "Metronidazole 500 mg IV 8 hourly".
- 4.4.5.4 I.O.L. (after counseling the patient and her husband, whatever the gestational age is.
- 4.4.5.5 Immediate delivery: On case of cord prolapse, fetal bradycardia or chorioamnionitis.

TABLE: Management of Premature Rupture of Membranes Chronologically

Gestational Age	Management
Term (37 weeks or more)	• Proceed to delivery, usually by induction of labor. • Group B streptococcal prophylaxis recommended.
Near Term (34 weeks to 36 Completed)	• Same as for term.
Preterm (32 weeks to 33 completed weeks)	• Expectant management, unless fetal pulmonary maturity is documented. • Group B streptococcal prophylaxis recommended. • Corticosteroid–no consensus, but some experts recommend. • An antibiotic recommended to prolong latency if there are no contraindications.
Preterm (24 weeks to 31 completed weeks)	• Expectant management. • Group B streptococcal prophylaxis recommended. • Single–course corticosteroid use recommended. • Tocolytics–no consensus. • Antibiotic recommended prolonging latency if there are no contraindications.
Less than 24 weeks	• Patient counseling. • Expectant management or induction of labor. • Group B streptococcal prophylaxis is not recommended. • Corticosteroid is not recommended. • Antibiotics- there are incomplete data on use in prolonging latency.

5. MATERIALS AND EQUIPMENT:

5.1 Sterile V/E pack–speculum.
5.2 HVS Tube.
5.3 Oxytocin augmentation protocol.
5.4 Ultrasound.

6. RESPONSIBILITIES:

6.1 Medical Director
6.2 Head of Department
6.3 Physician
6.4 Nurse

7. APPENDICES:

7.1 Partogram

8. REFERENCES:

8.1 American College of Obstetrician and Gynecologist (ACOG), Committee on Practice Bulletins. Premature rupture and Membranes. Clinical Management Guidelines for Obstetrician–Gynecologist No.80 Washington, DC: ACOG; April 2007.
8.2 Cousins LM, Smok DP, Lovett SM, et al Amnisure placental alpha macroglobulin -1 rapid immunoassay versus standard diagnostic methods for detection of rupture of membranes. Am J Perinatol.2005; 22(6):317–320.
8.3 Prelabour premature rupture of membranes, RCOG green top guideline, November 2006.

8.4 William obstetrics, 22nd edition 2005.
8.5 Obstetrics and Gynecology, An evidence base text for MROCG, 2004.
8.6 Conchrance library, issue, 2004.
8.7 Integrated Management of Pregnancy & Childbirth. Managing Complications in Pregnancy and Childbirth. A guide for Physician and Midwives. WHO/ RHR/007, 2003.
8.8 CBAHI Standard 3rd Edition 2016.
8.9 MOH, Guidelines for Obstetrics and Gynecology, Clinical Policies and Procedures.

9. APPROVALS:

	Name	Title	Signature	Date
Prepared by:	Dr. Abdalla Mohamed Albasha	Obstetrician and Gynecologist		January 08, 2025
Reviewed by:	Dr. Mohannad Yaghmour	Head of the Department		January 12, 2025
Reviewed by:	Ms. Awatif Hamoud Al - Harbi	IPCD Director		January 12, 2025
Reviewed by:	Mr. Sabah Turayhib Al - Harbi	Director of Nursing		January 13, 2025
Reviewed by:	Mr. Abdulelah Ayed Al - Mutairi	QM&PS Director		January 14, 2025
Reviewed by:	Dr. Thamer Naguib	Medical Director		January 15, 2025
Approved by:	Mr. Fahad Hezam Al - Shammari	Hospital Director		January 22, 2025

Name: _____ الاسم: _____ MRN: | | | | | | | | | | رقم الملف الطبي: | | | | | | | | | |

PARTOGRAM

Date & time of admission: _____ Consultant: _____

E.D.D: _____ Parity: _____

Special instructions: _____

FETAL HEART RATE

190 180 170 160 150 140 130 120 110 100 90 80 70 60

0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24

Duration of rupture of membranes (Hrs)

Liquor

Moulding

CERVIX DESCENT

10 9 8 7 6 5 4 3 2 1

Duration of labor

0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24

Name: _____ الاسم:

MRN: | | | | | | | | | | رقم الملف الطبي

PARTOGRAM

Date & time of admission:

Consultant:

E.D.D:

Parity:

Special instructions:

FETAL HEART RATE

190 180 170 160 150 140 130 120 110 100 90 80 70 60

0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24

Duration of rupture of membranes (Hrs)

Liquor

Moulding

CERVICAL DILATATION

10 9 8 7 6 5 4 3 2 1

Duration of labor

0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24