**AN ADAPTED EVIDENCE-BASED CLINICAL PRACTICE GUIDELINE**

**ON**

**PRETERM PRELABOR RUPTURE OF MEMBRANES**

**Overview**

This is an adapted evidence-based clinical practice guideline for the management of antepartum hemorrhage.

**Guideline adapter**

**This guideline has been adapted by the Egyptian Universities Obstetrics & Gynecology Guideline Working Group (EUOBGYN-GWG).**

**Release date**

July 2023

**GUIDELINE ADAPTATION METHODOLOGY**

This guideline was produced in accordance with the ADAPTE methodology and procedure for the adaptation of evidence-based clinical practice guidelines published by the ADAPTE Group (Fervers B, et al., Adaptation of clinical guidelines: literature review and proposition for a framework and procedure. Int J Qual Health Care 2006; 18(3): 167-176).

**sources of the guideline**

**This guideline was adapted from:**

1. National Institute for Health and Care Excellence. (2022). Preterm labour and birth [NG. 25].  
   <https://www.nice.org.uk/guidance/ng143>
2. Queensland clinical guidelines (2022). Preterm prelabour rupture of membranes.  
   <https://www.health.qld.gov.au/__data/assets/pdf_file/0035/736964/g-pprom.pdf>
3. Ronzoni S, Boucoiran I, Yudin MH, et al. SOGC Maternal Fetal Medicine Committee, Guideline No. 430: Diagnosis and management of preterm prelabour rupture of membranes. J Obstet Gynaecol Can. 2022 Nov;44(11):1193-1208.e1
4. Prelabor Rupture of Membranes: ACOG Practice Bulletin, Number 217. Obstet Gynecol. 2020 Mar;135(3):e80-e97
5. Royal College of Obstetricians and Gynaecologists. PROM after 24th weeks’ gestation. Green-top Guideline No. 1. London: RCOG; 2019.

# Definition:

Preterm prelabor rupture of membranes (PPROM), is defined as the spontaneous rupture of fetal membranes before 37 weeks’ gestation, preceding the onset of labor.

The problem of PPROM was evaluated in some Egyptian studies. At Ain Shams University, Abouseif H et al (2018), studied PPROM along cases in 5 years and reported an average prevalence of 4.1%. At Zagaig University, El-Shabrawy A (2021) reported a prevalence of 2.1%. No published national studies.

# Diagnosis

* **Assess for a differential diagnosis:**
* Leakage of urine (incontinence).
* Physiological vaginal discharge.
* Bacterial infection e.g., bacterial vaginosis.
* Cervical mucus (show) which may be a sign of impending labor.
* **Physical examination:**
  + A sterile speculum examination demonstrating liquor and culture of vaginal swab should be obtained when expectant management is decided.
* **Ultrasound examination:**
* Provides a useful adjunct for diagnosis of oligohydramnios but is not diagnostic.

# 2-Assesment

* **Assessment of maternal signs:**
* Vital signs should be monitored closely for any sign of inflammation or infection.
* Perform abdominal palpation to assess the fundal height and uterine tenderness.
* **Ultrasound assessment:**
* For amniotic fluid index (AFI) every 2 weeks.
* Doppler velocimetry every 2 weeks.
* Fetal Biometry every 2 weeks.
* CTG every week if / when more than 32 weeks gestational age.
* **Total Leucocytic Count and C-RP on admission:**
* Serial monitoring of white cell count or other markers of inflammation have not been proven to be useful in the absence of other clinical signs of infection.

# 3-Management

* **Hospital admission and outpatient follow-up:**
* All cases of PPROM should be admitted to hospital at time of diagnosis for at least 48 hours.
* Counselling patients for outpatient management should only be considered by a Consultant Obstetrician after reviewing the following criteria:
* Gestational age
* Close accessibility to the hospital
* Absence of signs of threatened premature labor.
* No evidence of infection
* Absence of maternal or fetal risk factors.
* Absence of fetal compromise.
* **Antibiotics:**
* Antibiotics should be given for 7 - 10 days or until birth; whichever is sooner.
* Start with a combination of intravenous Amoxicillin/ampicillin 2 g IV every 6 hours for 48 hours, followed by amoxicillin 250 mg oral every 8 hours, PLUS erythromycin 250 mg oral every 6 hours .
* Avoid the use of Amoxicillin/Clavulanate as it is associated with neonatal necrotizing enterocolitis in the setting of PPROM.
* Clarithromycin 500 mg oral every 12 h for 7 days If there was any evidence of *Ureaplasma, Mycoplasma or Chlamydial* amniotic infection
* **Ante-natal Corticosteroids for fetal lung maturation:**
  + Given between 28 to 36 weeks’ gestation.
  + May be repeated (2nd dose ) but not every 2 weeks.
  + Betamethasone 12 mg 1M every 24 hours x 2 doses.
  + Dexamethasone 6 mg every 12 hours x 4 doses.
* **Magnesium sulphate for neuroprotection:**
  + Given between 28 to 34 weeks’ gestation, when delivery is expected to happen within 24 hours
  + Start with an intravenous bolus of Magnesium sulfate of 4 grams which is given over 15 minutes, followed by an intravenous infusion of 1 gram per hour until birth; or for 24 hours; whichever is sooner.
* **Tocolysis:**
* Short term tocolysis may be indicated for 48 hours from the time of admission, to allow for a course of corticosteroids to be completed, and for transfer to a tertiary hospital if required.
* Calcium channel blockers could be given. Dose: One slow release tablet orally (20 mg) / every 6 hours (daily 80 mg).
* Repetition of the dose is not recommended.Some evidence reported that prolonged use of tocolysis in PPROM without contractions was not associated with better perinatal outcomes and yielded no difference in latency duration.
* In one Cochrane review, tocolysis was associated with a longer latency and fewer births within 48 hours of PPROM, but with increased risks for Apgar score <7 at 5 minutes, need for ventilation support, and chorioamnionitis when PPROM occurred at <34 weeks gestation, i.e. used for a longer time.
* **Amnioinfusion:**
* There is no recommendation for amnioinfusion.
* Although a few observational studies found lower perinatal mortality associated with amnioinfusion, all RCTs published to date found no difference in perinatal mortality and neonatal morbidity, suggesting that amnioinfusion is not recommended.
* **Managing an existing cervical cerclage following PPROM:**
  + Immediate removal of cerclage stitch or tape should be performed once the diagnosis of PPROM is confirmed.
* **Diagnosis of Chorioamnionitis:**

**Clinical signs of early chorioamnionitis**

* + Fever: maternal temperature > 38.0° C.
  + Uterine tenderness.
  + Maternal or fetal tachycardia.
  + Offensive discharge.
  + Maternal blood tests (C-reactive protein and white cell count) may be helpful.
* **Delivery:**
  + Termination of pregnancy should be considered in the following situations:
    - * The confirmation of presence of lethal fetal anomalies.
      * Intrauterine fetal demise.
      * Non-reassuring fetal status (non-reassuring non stress test).
      * Severe preeclampsia or eclampsia.
      * Antepartum hemorrhage.
      * Clinical signs of early chorioamnionitis.
      * Planned termination during expectant management.
      * The development of regular uterine contractions.
      * Achieving 36 weeks’ gestation.
* **Intrapartum prophylaxis (LAP) for GBS**
  + Intrapartum antibiotic should be given in the form of ampicillin 2 gm IV /6 hours for 2 days (GBS coverage if its status is unknown or positive), PLUS the macrolide line (erythromycin, azithromycin, or clarithromycin)
* **Prevention of recurrence in subsequent pregnancies:**
  + Patients with prior preterm PROM have an increased risk of recurrent PROM and preterm birth, and a detailed medical and obstetric history should be taken.
  + Progesterone prophylaxis is considered in patients with a history of preterm prelabor rupture of membranes.
* Abnormal vaginal discharge has shown a significant association with the occurrence of recurrent PROM
* **Pre-viable PROM: Before 28 weeks’ gestation:**
  + Counseling for termination.
  + Antibiotic prophylaxis to prolong latency is administered at admission according to the same protocol used in patients who present with preterm PROM at later gestational ages.
  + If hind water rupture is suspected and the AFI is adequate, consider conservative management for 1 week. If leakage stops and the AFI is adequate, conservative measures and follow up of the patient is continued .Once leakage stops and AFI is accepted, routine obstetric follow up is recommended with advice to the patient to return if another leakage happen.
* **Mode of termination according to obstetric condition.**