

PRE-LABOUR RUPTURE OF MEMBRANES AT TERM

DEFINITION

Pre-labour rupture of membranes (PROM) is rupture of the membranes prior to established labour in women at 37 completed weeks gestational age. The overall incidence rate is 8%¹. Most women labour spontaneously, with approximately 70% by 24 hours, 90% by 48 hours and 2-5% will not labour by 72 hours². Despite the rarity of major complications, PROM is associated with increased maternal and neonatal morbidity³.

DIAGNOSIS

The diagnosis of spontaneous rupture of membranes (SROM) is based on maternal history. Women with an uncertain history of PROM should be offered a speculum examination to determine whether their membranes have ruptured. (It is recommended that women lie flat on their side for 30 minutes prior to the exam.) Digital vaginal examination is to be avoided, as it is strongly associated with increased rates of chorioamnionitis.⁴

Nitrazine testing (amnicator) may facilitate the diagnosis where there is uncertainty. Amnicator testing has sensitivity of 81.8%, specificity of 83.3%, positive predictive value of 52.6% and negative predictive value of 96.2%.⁵ False positive results are possible with urine, blood, semen, bacterial infection; for example, bacterial vaginosis or trichomonas. In the absence of observed liquor on speculum and a negative amnicator result, it is reasonable to assume the membranes are intact.

MANAGEMENT

An assessment of **all women** with PROM at term, to check maternal and fetal wellbeing, is recommended before deciding on management. (This does not necessarily need to be performed in hospital). It is recommended that all women with signs of infection or chorioamnionitis are offered immediate intervention.

An obstetric consultation is recommended for women with PROM 'before 24 hours' (Section 88 referral guidelines¹²)

Vaginal examinations (VEs) have been shown to be the strongest predictor of clinical chorioamnionitis for women with PROM, with increasing rates from 3-4 VEs (OR 2.06⁴ to > 8 VEs OR 5.07) and are to be avoided. Regardless of the management option if examination is clinically indicated and will change management a sterile speculum examination is recommended. Digital examinations should be minimised.

- Women with **signs of infection in association with PROM at term** require careful assessment and the **immediate offer of intravenous (IV) Broad Spectrum Antibiotic Therapy in a secondary/**

tertiary facility (Appendix 1). If vaginal birth is appropriate it is recommended that they are offered an induction of labour as soon as possible.

- If **meconium stained liquor is present**, an assessment, CTG and an obstetric review in a secondary/tertiary unit is required and IOL should be expedited. In a primary unit, the women require a telephone consult with the obstetric team at secondary/tertiary unit and the recommendation of immediate transfer.
- Women with **Group B Streptococcus (GBS) risk factors require the offer of both induction of labour and intrapartum prophylactic IV antibiotics.** Refer to GBS guideline [WCH GLM0032](#).
- **GBS risk factors:**^{7,8,9}
 - a previous GBS-infected baby
 - GBS bacteriuria of any count during the current pregnancy
 - intrapartum fever $\geq 38^{\circ}\text{C}$
 - membrane rupture ≥ 24 hours (unless recent negative 'GBS swab')
 - GBS colonisation in current pregnancy, unless negative GBS swab (at ≥ 37 weeks, combined vaginal-rectal, 'selective broth' laboratory process used)
- **Expectant management** is appropriate for women **who are well and have no risk factors.**^{3,6,10,11}
- Women **suitable for expectant management** who subsequently *go into spontaneous labour and give birth before 24 hours* has elapsed since ROM **do not require** prophylactic IV antibiotics.
- Women who *do not go into spontaneous labour within 24 hours of ROM* have developed a risk factor for early onset GBS infection and **require the offer of an induction of labour and prophylactic IV antibiotics** as soon as practicable. Commence antibiotics at the beginning of the induction process.
- Prophylactic antibiotics for neonatal GBS infection are not indicated for women who have had a negative GBS swab within the previous five weeks (Campbell et al 2004 & CDC 2010), although they may choose to have them.
- Women suitable for expectant management who spontaneously labour but *do not give birth by 24 hours after ROM* require the **offer of prophylactic IV antibiotics at 24 hours post ROM.** Prophylactic antibiotics for GBS are not indicated for women who have had a negative GBS swab within the previous five weeks.^{7,8,9}
- Induction of Labour – Dinoprostone can be used for cervical ripening. It is recommended to commence oxytocin at 12 hours however if the cervix remains unfavourable consider leaving the Dinoprostone insitu for a further 12 hours. Dinoprostone should **not** be continued for longer than 24 hours. Refer to Induction of Labour guideline [WCH GLM0035](#).

INTRAPARTUM MANAGEMENT IN PRIMARY UNIT SETTING

Women in spontaneous labour, who *do not give birth before 24 hours after ROM*, with no clinical evidence of infection to mother or baby require consultation with CWH medical staff. This is with a view to consider the offer of prophylactic antibiotics in the primary unit.

MATERNAL FEVER AND SUSPECTED CHORIOAMNIONITIS

If maternal fever is present, temperature, pulse and fetal heart rate auscultation should be monitored every 6 hours, or more frequently, if indicated and IV antibiotic therapy commenced (see below).

Women with fever or signs of chorioamnionitis require immediate treatment, intervention and birth expedited.

Clinical signs of chorioamnionitis include maternal fever ($\geq 38^{\circ}\text{C}$) AND 2 OR MORE of the following:

- abdominal tenderness
- offensive vaginal discharge
- offensive liquor
- maternal tachycardia
- fetal tachycardia

Where there are clinical signs of infection, appropriate specimens including bloods for: CBC, CRP and cultures as well as MSU and HVS are required before commencing antibiotic treatment.

ANTIBIOTIC REGIME IN CASES OF SUSPECTED CHORIOAMNIONITIS

(regardless of Group B Strep status)

Antibiotic therapy

Amoxicillin IV 2 g stat (in 100 mL 0.9% Sodium Chloride over 30 min)

then

Amoxicillin IV 1 g 4 hourly until birth

(in 20 mL 0.9% Sodium Chloride via slow push)

AND Gentamicin 5 mg/kg OD IV infusion

(if more than one dose required contact CWH pharmacist on Pager 5009 for advice on monitoring serum concentrations)

**AND Metronidazole 500 mg IV 8 hourly in labour
(to consult with pharmacist if required postnatally)**

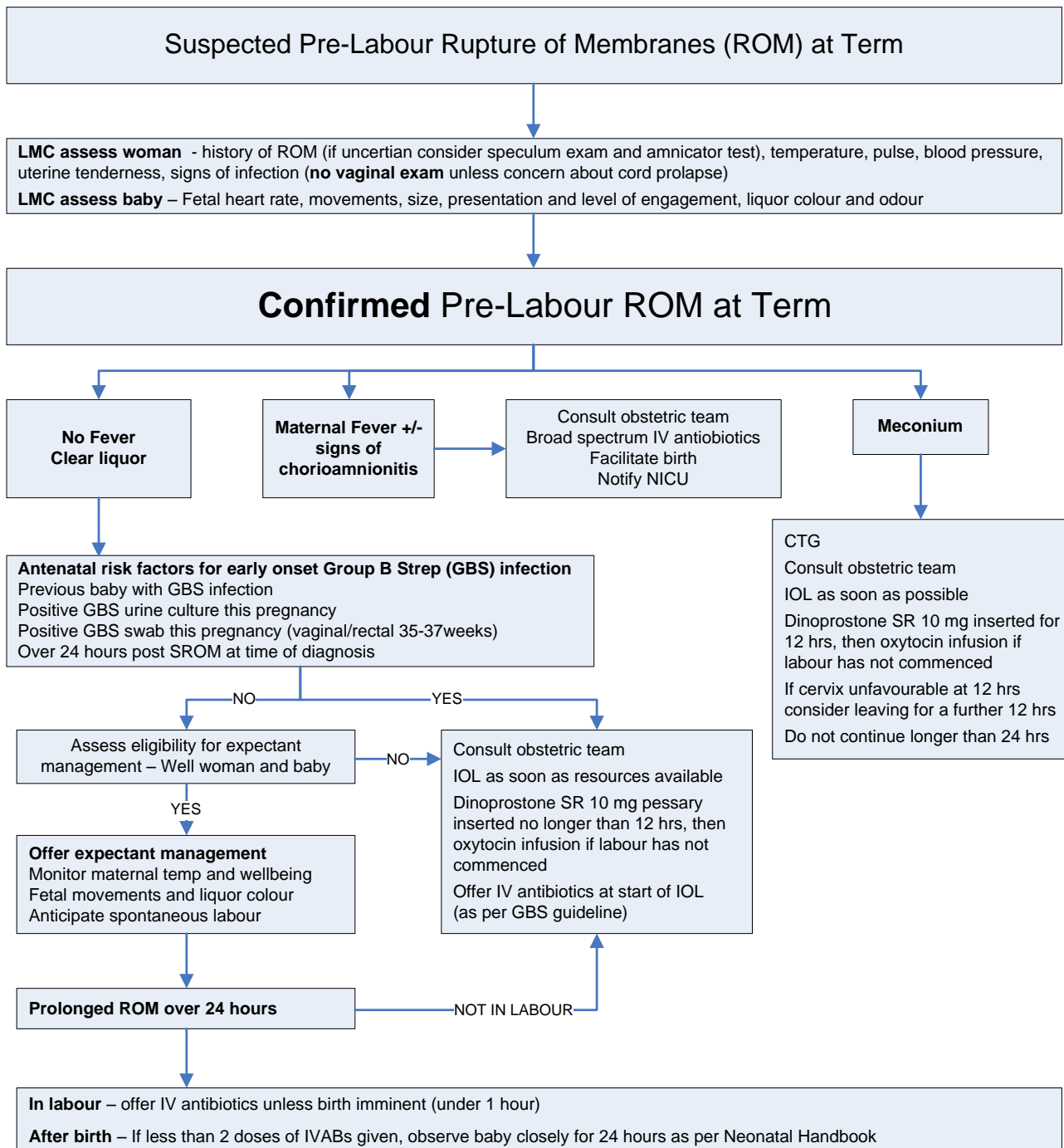
If the woman is allergic to penicillin
(replace penicillin component with)

Clindamycin IV 900 mg 8 hourly
(*this is a refrigerated drug*)

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APPENDIX 1



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Maternity Guidelines

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