Reference Number: UHBOBS129 **Version Number: 4a**	**Date of Next Review:** **Previous Trust/LHB Reference Number:**

Spontaneous Rupture of the Membranes (SROM) at Term (at or over 37 weeks' gestation).

Introduction and Aim

Pre-labour spontaneous rupture of membranes occurs most often at term with an incidence of around 8%. Spontaneous onset of labour following SROM occurs within 24 hours in 60% of women. Planning early birth by induction of labour following 24 hours of SROM compared with conservative measures may reduce the risk of maternal infectious morbidity (chorioamnionitis and endometritis) without increasing the risk of caesarean section [1].

Objectives

- To provide clarity to clinicians working within maternity services in planning care for women who experience Spontaneous Rupture of the Membranes.

Scope

This policy applies to all our midwifery staff in all locations including those with honorary contracts

Equality Health Impact Assessment	*An Equality Health Impact Assessment (EHIA) has not been completed.*
Documents to read alongside this Procedure	*Induction of Labour Guideline* *Group B Streptococcus Guideline* *Intrapartum Care Guideline* *Sepsis Guideline*
Approved by	*Maternity Professional Forum*

Accountable Executive or Clinical Board Director	*Ruth Walker, Executive Nurse Director*
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1.1.1.1.1.1 Disclaimer

If the review date of this document has passed please ensure that the version you are using is the most up to date either by contacting the document author or the Governance Directorate.

Summary of reviews/amendments			
Version Number	**Date of Review Approved**	**Date Published**	**Summary of Amendments**
1	Dec 2008	Dec 2008	New Document
2	Dec 2011	Dec 2011	Reviewed an Updated by Pina Amin & Alex Rees
3	Mar 2014	May 2014	Reviewed and Updated by Pina Amin and Claire Francis
4	Mar 2018	Mar 2018	Reviewed and Updated by Pina Amin and Caryl Thomas
4a	11/01/2019	14/01/2019	Antibiotic dosage information removed and replaced with 'Refer to Micro guide'
5	Sept 2020		Reviewed and updated by Ruba Halabi to clarify regarding offer of induction vs expectant management and limit of vaginal examinations before induction in Term SROM.
6	Dec 2021	Feb 2022	

1 Table of Contents

Contents

1.1 Table of Figures

1.2 Table of Tables

2 Pre-labour Spontaneous Rupture of Membranes (SROM) at term (≥37 weeks' gestation)

2.1 Definition

Pre-labour spontaneous rupture of membranes is defined as rupture of the fetal membranes before the onset of regular, painful contractions at or later than 37 weeks' gestation.

Back to Contents

2.2 Initial Telephone Assessment

- Take a detailed history using the Euroking telephone contacts
- Establish if the woman is Midwifery/ Obstetric led care.
- If the woman is contracting then refer to MLU/Delivery Suite as appropriate for a labour assessment.

If any of the following are reported, the woman should attend promptly for review on the Obstetric Assessment Unit (OAU):

Features that should prompt early review on OAU (within 2 hours)
Meconium-stained liquor
Per Vaginal Bleeding
Offensive smelling liquor
Reduced fetal movements
Maternal pyrexia or feeling unwell
Group B Streptococcus (Can be seen on the MLU if under MLC see GBS guideline for further information)
Multiple pregnancy
Non cephalic presentation

Table 1 Features present at Term SROM that should prompt early review on OAU.

- If a good history of pre-labour SROM is reported in a well woman reporting normal fetal movements and clear/pink liquor draining then an assessment can be made within 6 hours in the right area (Community midwife/MLU/OAU).

Back to Contents

2.3 Discussion of Induction of Labour vs Expectant Management for 24 hours If GBS negative or unknown

At the time of assessment following SROM (within 6 hours of SROM) all women should be offered the choice of induction of labour as soon as possible versus expectant management for 24 hours. The risks and benefits of each option are detailed below:

Expectant Management for 24 hours	Induction of Labour
60% of women will labour spontaneously within 24 hours of spontaneous rupture of membranes [2]	Evidence suggests there may be a lower risk of clinical chorioamnionitis or maternal temperature in labour and after labour in women who opt for induction of labour [2] [1].
There does not appear to be an increased risk of neonatal infection with 24 hours of expectant management [2] .	The woman will need to be admitted to the Obstetric Led Unit for induction please see section 5.4 of the IOL guideline (2020) for management of prelabour rupture of membranes: preterm and term.
If MLC, spontaneous labour would not require transfer to CLU in the absence of complications, and intermittent fetal auscultation is still recommended.	There is no increased risk in caesarean section rates in women who opt for induction of labour.

Table 2 Discussion of Expectant Management for 24 hours vs Induction of Labour

Women opting for induction of labour should be transferred to the obstetric led unit within 6 hours and as soon as is manageable. See Induction of Labour Guideline for induction process.

Back to Contents

All telephone conversations with woman should be recorded on the Euroking telephone contact pathway. This enables a full risk assessment to be performed for each contact and easy access to review the advice offered to woman during previous contacts

Following confirmation of no additional risk factors or indication/desire for immediate IOL inform the woman of the following:

- 60% of women will labour spontaneously after Term SROM.
- There is no increased risk of baby having an infection if the woman waits up to 24 hours for spontaneous labour compared with having an induction of labour within 6 hours of SROM.
- If she labours spontaneously within 24 hours, and she was previously MLC, she would remain so.
- She has the choice to go straight to having an induction of labour within the 6 hours of SROM.
- She would have to come in to OLU, where she would be assessed and given either a prostaglandin pessary (Prostin) for 6 hours or then a hormone drip, or started straight on the hormone drip.
- We would recommend continuous electronic fetal monitoring with an induction of labour. This is because the hormone drip can be stressful for babies.
- There may be a reduced risk of the woman developing an infection of the womb if she goes straight to induction of labour without waiting 24 hours. This doesn't seem to change the outcomes for babies.
- There is no increased risk of caesarean section if the woman opts for induction of labour.
- Following discussion, the woman's preferred option and agreed management plan should be recorded under the advice given section of the telephone contacts on Euroking.

2.4 Advice to women with SROM opting for Expectant Management:

- The risk of serious neonatal infection in women with prolonged SROM is 1% compared with 0.5% for women with intact membranes.
- Change pads often (at least every 4 hrs) and observe loss. If not clear, appears green/heavily blood stained or offensive smelling, call Delivery Suite/OAU promptly.
- Record temperature every 4 hours during waking hours using a tempadot (supplied by the hospital), if feels unwell or with fever (temperature above 37.5^{o}C), call the OAU promptly.
- Avoid sexual intercourse as this may be associated with an increased risk of infection.
- Can continue to shower and bath.

Back to Contents

2.4.1 Limiting vaginal examinations in women opting for Expectant Management

There is evidence to suggest an increased risk of chorioamnionitis with increasing numbers of vaginal examinations [3]

A digital vaginal examination(VE) should only be performed if active labour is suspected. Woman should be informed that repeated VE's may increase the risk of infection. Prior to any VE a discussion on the risks and benefits should be had and documented in the maternal records. If a second VE is performed prior to active labour women should be informed that this is an indication To consider transfer to obstetric led care for active management. Women must be informed of this so that informed consent for the VE can be obtained.

A sterile speculum examination should always be conducted first, and only go ahead to a digital vaginal examination if absolutely necessary.

Back to Contents

3 Midwifery Led Care Criteria & Management

3.1 Flowchart: Management of Term SROM in women under Midwifery Led Care

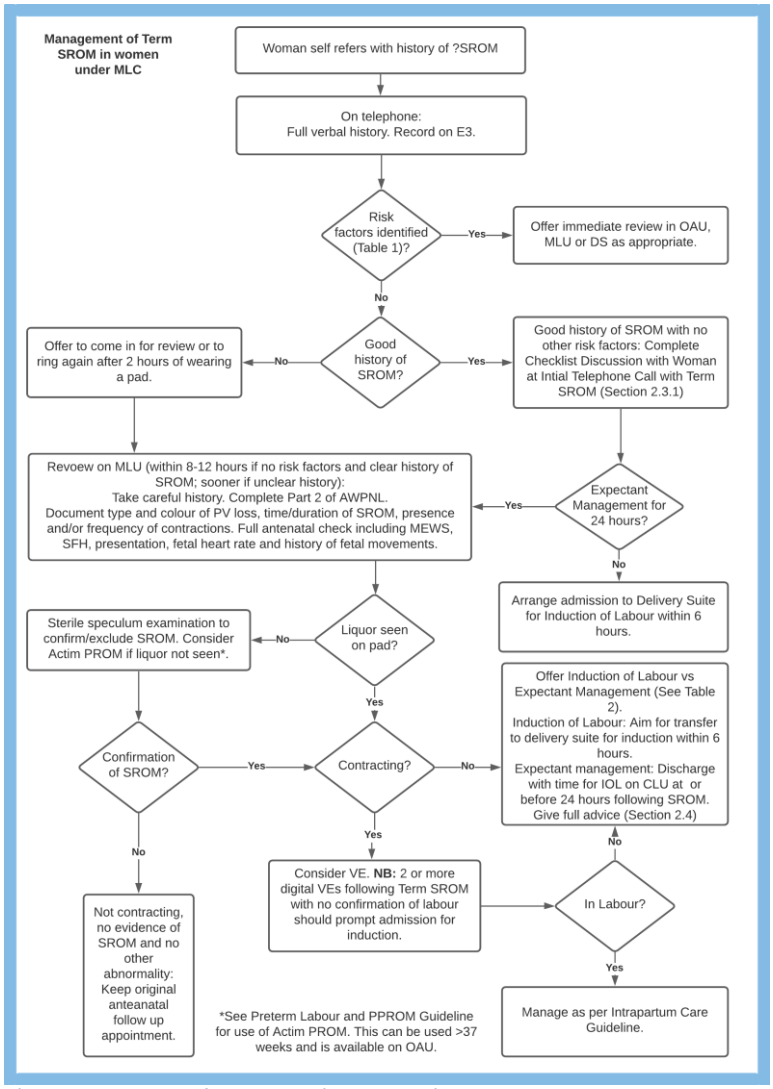

Figure 1 Management of Term SROM in women under MLC

3.1.1 Actim PROM

What is Actim PROM?

Actim PROM is a vaginal swab that detects insulin-like growth factor binding protein-1(IGFBP-1) which is found in amniotic fluid. It can be used at any gestation.

It has excellent sensitivity (97-100%)13,14 and specificity (95-100%) meaning that a patient can be confidently discharged back to their normal antenatal care without the need for further visits or investigations. Conversely it should also reduce the number of women in whom PPROM is missed.

It is important to be aware that the sensitivity of this test will be significantly lower in the case of 'micro-leaks' where more than 12 hours has elapsed since liquor was first noted to be draining.

Criteria for using Actim PROM	**Contraindications for using Actim PROM**
• History of SROM within the last 12 hours, but **NO** evidence of liquor on speculum examination	• Evidence of SROM on examination
• Any gestation	• History of threatened preterm labour **WITHOUT** any history of PPROM
• Can be used in the presence of blood, semen, infection, lubricant	• Loss of fluid over 12 hours ago, with no further loss since

Criteria and Contraindications for using Actim PROM

3.1.1.1 Method for Carrying Out Actim PROM15

1. Hold the swab in the vagina for 10-15 seconds. Ideally this should be done as a high vagina swab at the time of speculum examination. This allows for visual assessment of any liquor draining and may negate the need for testing. The sample can also be obtained from a low vaginal swab left in situ for 10-15 seconds but this should **ONLY** occur if the patient declines a speculum examination.
2. Place the swab in the Specimen Extraction Solution and swirl around vigorously for 10-15 seconds.
3. Discard the swab.
4. Place the yellow dip area of the dipstick into the solution and hold it there until you see the liquid enter the result area.
5. Remove the dipstick from the solution and place in a horizontal position.
6. Interpret the results:

POSITIVE RESULT: - 2 blue lines. Can be read as soon as 2 lines are visible.**-** Treat as PROM

NEGATIVE RESULT: - 1 blue line. Should be confirmed at 5 minutes.
- PROM excluded. Discharge if no other concerns. Return to her regular antenatal care.
INVALID RESULT: - No line. Test should be repeated.

Back to Contents

3.2 Criteria:

- Low risk pregnancy with no identifiable risk factors (as listed above) highlighted during first telephone assessment.

Back to Contents

3.3 Initial telephone consultation:

- Take careful verbal history – if good history of SROM but not contracting and no significant risk factors identified complete the E3 telephone contact pathway
- If the woman wishes to go ahead with Induction of Labour, arrange for admission to First floor north, IOL suite within 6 hours.
- If she has no risk factors is not contracting, and wishes to have Expectant Management for 24 hours, invite her for review in MLU 6 hours
-

Back to Contents

3.4 Ongoing Management:

- When reviewing any woman with possible SROM complete Part 2 of AWCPNL.

- Observe and document the type, colour and odour of PV loss and undertake a full antenatal check and review.

A full antenatal check includes:

- temperature, BP, pulse
- urinalysis
- observe for PV loss
- abdominal palpitation
- assess FM
- auscultate the FH – ECTG if indicated.

- If confirmed as SROM either by visualisation of liquor or sterile speculum examination but the woman is not contracting, discuss the options of induction of labour or expectant management for 24 hours.

- If a woman is showing signs of labour, a VE should be performed to assess labour progress. If she is not in established labour, and provided no more than one digital vaginal examination has taken place, she may opt to continue expectant management for 24 hours (i.e., if 2 or more digital VEs occur, induction of labour should be offered).

Back to Contents

3.5 Expectant Management for 24 hours.

- Providing there are no adverse features, and the woman chooses expectant management, the woman may go home.

- If opting to go home give advice re: SROM and latent phase of labour (as above) and ensure telephone numbers are given to call MLU if any concerns or changes. Discharge home with tempadot thermometers

- The woman should be offered be provided with a date and time for IOL in the CLU within 24 hours following ROM. If this time would be between 23:00 and 05:00, offer a time of induction prior to 23:00 rather than asking the woman to attend in the early hours of the morning.

- Women that decline IOL following SROM >24 hours should have an individualised management plan agreed with either the Consultant Midwife or on call obstetric team.

- IOL advice information leaflet should be given to all women with clear instructions of dates/times and relevant telephone numbers of CLU.

- If no evidence of SROM on speculum/not in established labour and no abnormality detected, may go home and keep original follow-up appointment

A woman who is not in established labour with any of the features listed below should be transferred to CLU for an obstetric review:

Indications for transfer to CLU for obstetric review in women with Term SROM and otherwise low risk pregnancy:
Meconium-stained liquor (any amount)
Maternal pyrexia
Fetal heart rate irregularities
Reduced fetal movements

Table 3 Indication for transfer to CLU for obstetric review (+/- IOL) in women with Term SROM and otherwise low risk pregnancy.

The presence of any of the above should prompt consideration for induction of labour.

Back to Contents

4 Obstetric led care Criteria & Management

4.1 Flowchart: Management of Term SROM in women under Obstetric Led Care or with identified risk factors.

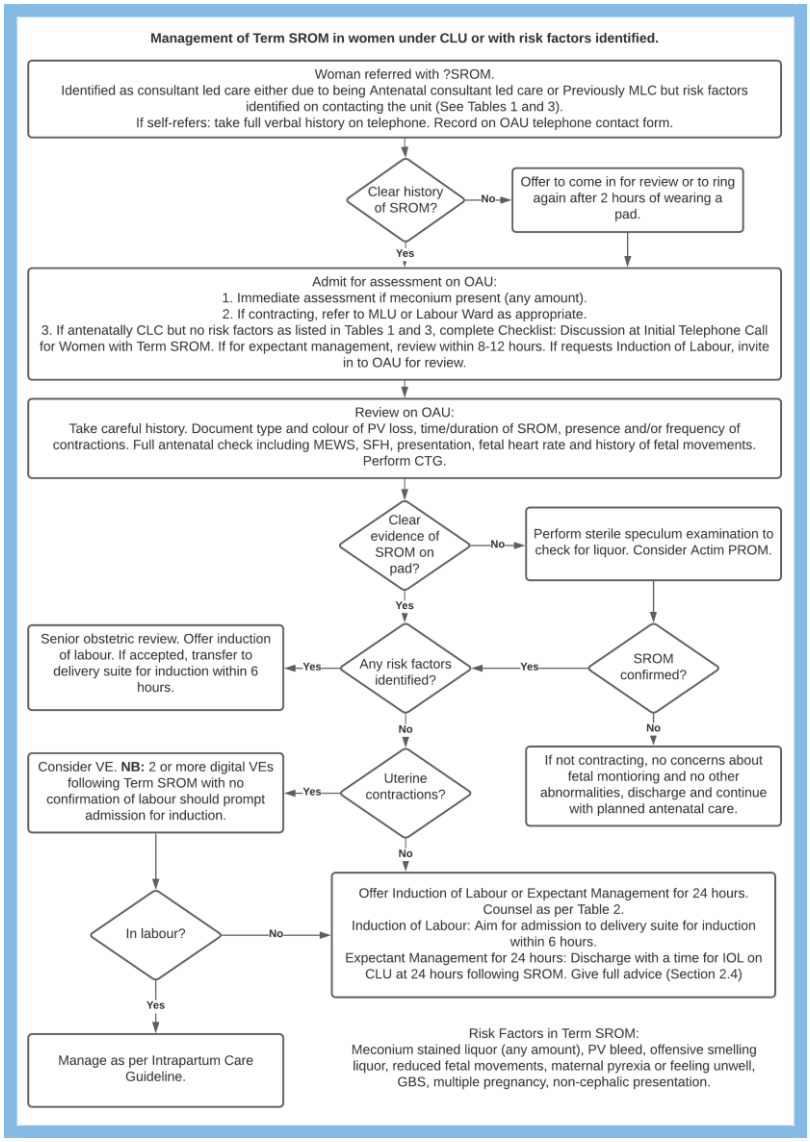

Figure 2 Management of Term SROM in Women under CLC or with Identified Risk Factors

[Back to Contents]

4.2 Criteria

- Obstetric led care antenatally.
- Transfers from MLU due to identified risk factors on first assessment (Table 1, Table 3).

Back to Contents

4.3 Assessment

- Undertake a full OAU admission check.
- Confirm by either a good maternal history of SROM or wet sanitary pad on assessment.
- If in doubt, undertake a sterile speculum to aid diagnosis (by an experienced midwife/doctor). Actim PROM should be considered if the diagnosis is not clear.
- Avoid digital vaginal examination unless there are uterine contractions and signs of labour.
- If there are no signs of maternal infection, prophylactic antibiotics need not be given.

Back to Contents

4.4 Expectant Management

Women should be given the options of induction of labour or expectant management for 24 hours. If she is not to be invited in within 1-2 hours, discussion of options of Induction of Labour vs Expectant Management should take place as per Section **Error! Reference source not found.**, and the E uroking telephone contacts pathways completed.

If a woman opts for expectant management for 24 hours, she can go home provided that:

Indications for outpatient expectant management for 24 hours in women under Consultant Led Care with Term SROM
No signs of labour
The woman is systemically well with no evidence of infection (full MEWS assessment must be documented on a MEWS chart).
The liquor is clear/pink and not offensive smelling.
There is no evidence of vaginal bleeding.
Singleton, cephalic presentation.
Normal auscultated fetal heart/ CTG (preferably computerised CTG meeting Dawes Redman criteria).

Table 4 Indications for outpatient expectant management for 24 hours in women under Consultant Led Care with Term SROM

Induction of labour should be offered 24 hours following SROM on the CLU.

- A date, time and ward location for induction should be provided along with an information leaflet and contact numbers for the CLU. If this time would fall between 23:00 and 05:00, the woman should be offered an induction time prior to 23:00 rather than be asked to come in the early hours of the morning. The planned time for induction should not exceed 24 hours.
- Information on the latent phase and advice about change in the liquor, fetal movements and maternal pyrexia should be provided if going home.
- Do not offer LVS or CRP until or expectant management beyond 24 hours.
- If labour has not started within 24 hours of rupture of membranes, advise the woman to labour in a setting where neonatal services are available and to stay for at least 24 hours post-delivery for maternal and neonatal observation.
- Should the woman decline induction of labour at 24 hours post SROM, she should be informed of the increased risk of infection.
- Fetal heart rate and fetal movements should be assessed every 24 hours by a midwife
- If a patient opts for expectant management, she should be reviewed by a senior obstetrician or Consultant midwife to discuss a management plan.
- Refer to the IOL guideline for mode of induction.

Commented [RH(aVU-OA1]: IOL guideline now recommends oxytocin IV infusion except in specific cases where the woman needs a senior obstetric review if a single vaginal Prostin is being considered.

Back to Contents

5 Diagnosis and Management of Chorioamnionitis

- Suspect chorioamnionitis if there is a maternal pyrexia, persistent maternal tachycardia, offensive vaginal discharge and/or uterine tenderness (Refer to suspected sepsis pathway).

- Rising fetal heart baseline can show infection and further assessment is needed.

- If maternal / fetal sepsis is suspected, follow the suspected sepsis pathway.

- Inform the paediatricians in cases of suspected or confirmed infection.

Back to Contents

Back to Contents

5.1 Checklist: Discussion with Women Declining Induction of Labour after 24 hours Expectant Management.

Following SROM the majority of women will go into labour and go on to give birth to a healthy baby, Women will always be supported in the choices they make regarding their labour, birth and place of birth, however it is important that you are provided with the best evidence available and informed of both the risks and benefits of both induction of labour and expectant management if your membranes have been ruptured for more than 24 hours.	☐
The risk of baby developing infection with prolonged rupture of membranes beyond 24 hours is around twice the risk if rupture of membranes has been less than 12 hours (1%). This risk increases the longer it takes from rupture of the membranes to onset of labour.	☐
It is recognised that babies whose membranes have ruptured are at increased risk compared to those with intact membranes. Consequently, we recommend having a review to check your observations and check baby's heart tracing at least once every 24 hours until you go into labour.	☐
Primarily due to the increased risk of infection, the national recommendation is that you labour and deliver in a unit with an on-site specialist neonatal unit, and that baby stays for observation for at least 12 hours after delivery to see for any sign of infection. This would mean labour and delivery in either the consultant led unit (CLU) or midwifery led unit (MLU). Home birth in this situation is not recommended but you would be supported with this choice should you wish to birth at home".	☐
Developing infection in labour for you and baby is more likely the longer it is between the rupture of membranes and the delivery of baby. Monitoring baby in labour gives us an added check for infection. We do recommend continuous monitoring of baby in labour for all women who have had ruptured membranes for longer than 24 hours. This requires you to labour and deliver on the consultant led unit. If you prefer to have intermittent auscultation, then we will have a low threshold for recommending continuous monitoring especially if baby's heartbeat is fast, as this is a sign of developing infection.	☐
Baby may have a poo inside the womb (meconium-stained liquor). This can be a sign that baby is in distress or struggling. If you notice a change in colour in the liquor, it is important to come in and get a review for both you and baby. Meconium in the liquor increases the risk of baby having breathing difficulties at delivery, and of baby having an infection. If there is meconium, it would reduce the risk to baby to have an induction of labour, regardless of how long it has been since the rupture of the membrane.	☐
You may have vaginal bleeding after rupture of the membranes. This is a serious risk factor, as it can be bleeding from the placenta which is providing baby with blood and oxygen. You should come in for review of you and baby at once if you notice any bleeding.	☐
If you start to feel unwell in any way, you should come in for a review so we can check on you and baby. This may be a sign of infection developing. Infections in pregnancy and labour can be quite severe, especially if they are not treated promptly. This would probably need treatment with IV antibiotics. There is no evidence that prophylactic antibiotics are of any benefit with rupture of membranes after 37 weeks, so we would not recommend this.	☐

Back to Contents

6 Pre labour Spontaneous Rupture of Membranes at term with Group B Streptococcus (GBS) carriage in this pregnancy or a previously affected neonate by GBS

- Women who are confirmed GBS carriers in this pregnancy should be offered immediate intrapartum antibiotics and induction of labour as soon as reasonably possible (this is because of the increased risk of Early onset GBS disease with prolonged rupture of membranes).

Please refer to the MLU GBS guideline for management of SROM in the presence of GBS for MLC women.

- Refer to Induction of Labour and Management of GBS in labour guidelines.

Back to Contents

7 Pre labour Spontaneous Rupture of Membranes at term with Meconium-stained liquor

7.1 Background

There is currently no national guidance in relation to the management of pre labour spontaneous rupture of membranes at term with meconium-stained liquor, and no figures available on the incidence. Between 15% and 20% of term pregnancies are associated with meconium-stained liquor (MSL), which, in most labours is not a cause for concern.

Back to Contents

7.2 Definition

Significant meconium-stained liquor is defined as either dark green or black amniotic fluid that is thick or tenacious, or any meconium-stained liquor having lumps of meconium. If no liquor is seen following rupture of the membranes there should be a high degree of suspicion that the liquor is heavily stained with meconium.

Non-significant or Light meconium-stained liquor is defined as a thin yellow/green stained fluid having non-particulate meconium.

Meconium aspiration syndrome (MAS) is a life-threatening condition whereby meconium is aspirated into the lungs during intrauterine gasping or when the baby takes its breath. This condition accounts for 2% of perinatal deaths.

Back to Contents

7.3 Management

- Any woman presenting with pre labour SROM with any type of meconium-stained liquor should be admitted promptly to the CLU for assessment.

A senior obstetric review should be performed and to include:

- Systolic and diastolic blood pressure
- Pulse
- Temperature
- Respiration rate
- Urinalysis

- Abdominal palpation
- Continuous electronic fetal heart rate monitoring

- The patient should be reviewed by a senior obstetrician ST4-5 or above to formulate a management plan. Induction of labour must be discussed with the woman.

- For women presenting at the MLU or planning home birth, transfer to obstetric care should be recommended and initiated.

- Women **should not** remain under midwifery led care following pre labour spontaneous rupture of membranes at term with meconium-stained liquor.

Back to Contents

8 Pre labour spontaneous rupture of membranes at term with breech presentation

Unless the woman is planning a vaginal breech birth (after full counselling – see breech guideline), then offer a category 3 caesarean section. This should be performed as soon as is safe to do so, taking into consideration time of last meal, blood results and whether the woman is establishing in labour. The 1st stage of labour is quicker in breech presentations and therefore these category 3 caesarean sections, in the absence of maternal comorbidities are usually appropriate to do out of hours. These women should not be routinely left until the day time.

Back to Contents

9 Pre labour spontaneous rupture of membranes at term in women planned for caesarean section

Rediscuss situation with mother. If maternal wishes are for caesarean section, then offer category 3 caesarean section as the woman has a high chance of labouring in the next 24 hours. This should be performed as soon as is safe to do so, taking into consideration time of last meal, blood results and whether the woman is establishing in labour. These category 3 caesarean sections, in the absence of maternal comorbidities are usually appropriate to do out of hours. These women should not be routinely left until the day time.

Back to Contents

10 Auditable Standards

1. All women presenting with uncomplicated Term SROM will have a discussion of options of induction of labour vs expectant management for 24 hours. This must be documented in the maternity record: 100%.

2. Women presenting with Term SROM requiring or requesting IOL should be transferred to delivery suite for induction with oxytocin (or in select cases, following review by a senior obstetrician, a single dose of Prostin) within 6 hours of the decision: 90%.

3. All women having expectant management for 24 hours of Term SROM will be admitted to delivery suite for induction (in the absence of spontaneous labour) no later than 24 hours after the time of SROM: 95%.

Back to Contents

11 References

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Back to Contents