Clinical Guideline

GROUP B STREPTOCOCCUS (GBS) INFECTION CARE IN PREGNANCY AND LABOUR

SETTING Maternity Services

FOR STAFF Midwives and Obstetricians

PATIENTS Pregnant women who have had a positive swab or urine culture for Group B Streptococcus

GUIDANCE

This guideline provides guidance for midwives and obstetricians on the management of pregnant women in order to prevent early-onset neonatal Group B Streptococcal disease (EOGBS). Group B Streptococcus (GBS) is recognised as the most frequent cause of severe early-onset infection in newborn infants.

Risk factors for EOGBS where Intrapartum Antibiotic Prophylaxis (IAP) for GBS is indicated-

- having a previous baby with GBS disease
- discovery of maternal GBS carriage through bacteriological investigation during pregnancy (for example, a urine infection or a swab taken to investigate a vaginal discharge)
- all preterm labours

Risk factors where Broad spectrum antibiotics are indicated

- suspected chorioamnionitis
  - low threshold with prolonged prelabour rupture of membranes
  - pyrexia in labour

Antenatal Care

Screening for GBS

Maternal request is not an indication for bacteriological screening

High Vaginal Swabs should only be taken where there is a clinical indication to do so, for example:

- Threatened preterm labour less than 37 weeks
- Increased/abnormal vaginal loss
- Prelabour rupture of membranes
- Suspected sepsis

GBS screening using Anorectal & Low Vaginal swabs (34 weeks onwards or earlier if preterm delivery anticipated) should only be used if-

- Carrier in previous pregnancy and baby not affected by GBS disease
- Carrier in previous pregnancy and neonatal outcome not clear

A single enriched culture medium swab or two different swabs can be used. State the indication for testing specifically on ICE.

Women with GBS diagnosed in previous pregnancy and baby not affected by EOGBS

- 50% likelihood of being a carrier in this pregnancy
- Offer one of the two options-
  - GBS screening and IAP if found positive
  - IAP without GBS screening

Women with GBS diagnosed in previous pregnancy and baby affected by EOGBS

- Offer IAP

IAP should be prescribed in the antenatal clinic after reviewing the drug allergies

Penicillin Allergy status

- Every attempt to clarify the patient's allergy status should be made at the booking appointment as it has implications for maternal and neonatal care (see below).

- Women who report that they are allergic to penicillin should be seen by a consultant. Women should be asked to clarify the nature and extent of penicillin allergy from their family of GP prior to consultant appointment.
  - Consultant team to document antibiotic plan in the partogram

- Women with a history of anaphylaxis, urticaria or rash within one hour of penicillin administration (type 1 allergy) should not receive a penicillin, cephalosporin or other β-lactam antibiotic. See the [redacted] for further information.

GBS carrier – management in antenatal period

If incidental finding on HVS treatment is not recommended but Intrapartum Antibiotic Prophylaxis (IAP) should be offered.

If GBS bacteriuria (urinary tract infection) is identified in the antenatal period then treatment is advised at the time of diagnosis in addition to IAP. Repeat MSU when treatment is completed.

Group B Strep urinary tract infection (bacteriuria)		**Duration**	**Comments**
1st line	**Amoxicillin** 500mg po tds	5 days	
Penicillin allergic* not type 1 allergy	**Cefalexin** 500mg po tds	5 days	
Penicillin allergic* type 1 allergy	**Trimethoprim** 200mg po bd	5 days	Manufacturers advise avoiding in first trimester. However, risk of teratogenicity is small unless the patient has low folate levels or is on another anti-folate drug (e.g. antiepileptics).

*Type 1 allergy- history of anaphylaxis, urticaria or rash immediately after penicillin administration

Induction of labour

Membrane sweeping is not contraindicated for women who are known GBS carriers

Method of induction of labour should not be influenced by carrier status.

GBS carrier women with prelabour rupture of membranes at term should be offered immediate IAP and induction of labour. If Induction cannot be started immediately, IAP should be commenced.

Place of birth

Women who are GBS positive, who are otherwise low risk can deliver on the Midwife Led Unit at St Michael's Hospital. IAP should be administered as per guideline.

Women at risk of neonatal GBS disease are not suitable for Ashcombe Birth Centre or home birth.

If labouring on MLU, transfer to Central Delivery Suite if:

- Maternal pyrexia of 38o once of 37.5 o twice
- Rising fetal heart rate
- Prolonged rupture of membranes
- Any suspicion of chorioamnionitis

Labour care

Continuous electronic fetal monitoring is only recommended if there are other risk factors associated with pregnancy and labour. Intermittent auscultation should follow the Care in labour and fetal monitoring Guidelines.

Water birth is not contraindicated

IAP should be administered as per guideline.

Every attempt should be made to keep the IV access site dry with the arm with IV access out of water where possible.

IV medicines must be given out of the pool.

Intrapartum prophylaxis is not required for

Women testing positive for GBS in a previous pregnancy, baby not effected and screen negative in this pregnancy. (see screening section for details)

Pre-labour, elective caesarean section with intact membranes

Recommended antibiotics

Group B Streptococcus Intrapartum prophylaxis Antibiotics to be administered as soon as possible after diagnosis of labour	1st line	**Benzylpenicillin** Loading dose 3g IV Subsequent doses 1.5g IV FOUR hourly until delivery	Maximum rate of administration = 300 mg/minute thus give 1.5g over a minimum of 5 minutes and 3g over a minimum of 10 minutes
	Penicillin allergic* not type 1 allergy	**Cefuroxime*** 1.5g IV tds until delivery	
	Penicillin allergic* type 1 allergy	**Vancomycin** 1g IV bd until delivery	Reconstitute with water for injections. Dilute further with 250ml of sodium chloride 0.9% Give over 120 minutes (The rate of administration must **NOT** exceed 10mg/ml) See information on vancomycin levels below
Group B Streptococcus Intrapartum prophylaxis + Likely Chorioamnionitis	1st line	**Cefuroxime*** 1.5grams IV tds plus **Metronidazole** 500mg IV tds	
	or if penicillin allergic* type 1 allergy	**Vancomycin (and not Teicoplanin)** plus **Gentamicin** 5mg/kg IV [redacted] (use current weight) Plus **Metronidazole** 500mg IV tds	Discuss on-going antibiotic therapy with microbiology See the [redacted] and [redacted] and use the gentamicin prescription charts. Do not administer Vancomycin and Gentamicin together; ensure the cannula is flushed between drugs.

*Type 1 allergy- history of anaphylaxis, urticaria or rash immediately after penicillin administration

Vancomycin levels

Take maternal bloods for a level before the 3rd dose but do NOT wait for level if the plan is to continue vancomycin. Document time bloods taken.

Target trough: 10-15mg/L

If levels out of range or for further interpretation of levels and subsequent dosing if therapy is to continue, discuss with microbiology.

Neonatal guidelines

Infants should be assessed for risk of infection as per *Infants at Risk of Early Neonatal Infections* guideline

Blood test to check vancomycin levels should be done for all babies where mothers have received vancomycin for IAP. Collect 0.5ml of blood from a heelprick into a paediatric lithium heparin (small green) bottle approximately 24h (18-30h) after the last dose given to mother. Ensure when ordering the test on ICE that the correct timing of mother's dose is entered and include in the clinical details that this is an assay of infant levels after maternal treatment.

Term infants who are clinically well at birth and whose mothers received IAP for more than 4 hours before delivery do not require special observation if there are no other risk factors.

Well infants with risk factors for EOGBS who received IAP for less than 4 hours prior to delivery, should be monitoried as per Immediate Care of the Newborn on CDS guideline.

Women with known GBS colonisation who decline IAP should be advised that the neonate should be monitored for signs of infection for 24 hours following delivery.

The neonatologists should be informed of any woman who commences IV antibiotics for confirmed or suspected bacterial infection at any time during labour or in the 24 hour period before or after birth, to allow review and treatment of baby as per the neonatal guideline.

Documentation
When a positive result is received this should be documented on the risk factors for labour on the front of the Birth Notes. The mother will be given a patient leaflet – *Preventing Group B Streptococcus Infection in the Newborn Baby.*

The result should be also documented on the risk factors for the baby on the postnatal pages

Monitoring
Monitoring will be undertaken through the patient safety incident reporting and issues taken to the CDS Working Party.

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RELATED DOCUMENTS
Labour Care
[redacted]
Infants At Risk Of Early Neonatal Infection On The Postnatal Wards
[redacted]
Immediate Care of the Newborn on CDS

[redacted]
Obstetrics & Gynaecology Antibiotic Guideline
[redacted]
Preventing Group B Streptococcus Gbs Infection In Newborn Babies (PiL)
[redacted]

REFERENCES

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Daniels J, Gray J, Pattison H, Roberts T, Edwards E, Milner P, et al. Rapid testing for group B streptococcus during labour: a test accuracy study with evaluation of acceptability and cost-effectiveness. Health Technol Assess 2009; 13(42).
Ohlsson A, Shah VS. Intrapartum antibiotics for known maternal Group B streptococcal colonization. Cochrane Database of Systematic Reviews 2009, Issue 3. Art. No.: CD007467. DOI: 10.1002/14651858.CD007467.pub2.
RCOG Guidance No. 36. Prevention of early onset neonatal group B streptococcal disease. Second Edition, July 2012.
NICE: Medicines Commentary, September 2018, The risk of MRSA and C difficile in people with documented 'penicillin allergy,

AUTHORISING BODY

CDS Working Party

SAFETY

No unusual or unexpected safety concerns to staff or patient.

QUERIES

Contact [redacted] Midwifery Matron ext. [redacted] or coordinating midwives/ obstetrician on Delivery Suite ext. [redacted].

Appendix 1 **Pathways of care** (RCOG, 2017)