Prevention of Early – Onset Neonatal Group B Streptococcal Disease Guideline

Guideline information

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Clinical

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N/A

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Scope:
The purpose of this guideline is to provide guidance for obstetricians, midwives, paediatricians and neonatologists on the prevention of early-onset neonatal group B streptococcal (EOGBS) disease and the information to be provided to women, birthing people their partners and family.

The guidance below uses the term 'woman' (pronouns she or her) to describe individuals whose sex assigned at birth was female, whether they identify as female, male or non-binary. It is important to acknowledge it is not only people who identify as women for whom it is necessary to access women's health and reproductive services. Therefore, this should include people who do not identify themselves as women but who are pregnant or have recently given birth. Obstetric and Midwifery services and delivery of care must therefore be appropriate, inclusive and sensitive to the needs of those individuals whose gender identify does not align with the sex that they were assigned at birth

To be read in conjunction with:
645 – PreTerm Pre-Labour Spontaneous Rupture of Membranes Guideline

RCOG guideline on the prevention of early – onset neonatal group streptococcal disease follow the link below

https://obgyn.onlinelibrary.wiley.com/doi/full/10.1111/1471-0528.14821 (opens in new tab)

All Wales Guideline on the prevention of early onset sepsis

https://wisdom.nhs.wales/health-board-guidelines/swansea-bay-neonatal-file/all-wales-guideline-eos-guidance-v7-2022-pdf/ (opens in new tab)

Patient information:
https://www.rcog.org.uk/for-the-public/browse-all-patient-information-leaflets/group-b-streptococcus-gbs-in-pregnancy-and-newborn-babies/ (opens in new tab)

Owning group:
Obstetrics & Maternity Working Control Document Group
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Executive Director job title:
Clinical Lead Obstetrician

Reviews and updates:
1.0 – New Guideline
2.0 – Revised
3.0 – Updated and Revised

Keywords
Group B streptococcal, Pregnancy, Birth

Glossary of terms
GBS - group B streptococcal
EOGBS – Early onset group B streptococcal
IAP - Intrapartum Antibiotic Prophylaxis

Key points:
Management of Group B haemolytic streptococcus in pregnancy and labour

Contents

Scope

The purpose of this guideline is to provide guidance for obstetricians, midwives, paediatricians and neonatologists on the prevention of early-onset neonatal group B streptococcal (EOGBS) disease and the information to be provided to women, birthing people their partners and family.

Aim

The aim of this document is to:

- Improve outcomes for babies at risk of EOGBS
- Provide guidance on the management of the neonate at increased risk of EOGBS

Objectives

The aim of this document will be achieved by the following objectives:

- Provide clear guidance on the management of GBS during pregnancy, labour and birth
- Provide guidance on the management of the neonate at increased risk of EOGBS

Background

- Group B Streptococcus (GBS) is recognized as the most frequent cause of severe early-onset (<7 days age) infection in newborn infants.

- GBS may be present in 20-40% of adults,

- Spread is trans- perineal so that rectal and low vaginal swabs have a higher yield than high vaginal and cervical swab. It is also found in urine in case of GBS bacteriuria, which is associated with a higher risk of neonatal disease.

- When detected antenatally up to 50% of pregnant carriers may be culture negative at the time of labour.

- Of those neonates affected, approximately two-thirds will present within 7 days of birth (early onset disease), while the remaining one-third present after the first week (late onset disease).

Bacteriological screening

- Universal bacteriological antenatal GBS screening is NOT recommended (unless as a part of clinical trial)*

- Maternal request is NOT an indication for bacteriological screening.

- If a woman has been GBS positive in a PREVIOUS pregnancy, offer bacteriological testing at 35-37 weeks or 3-5 weeks prior to anticipated birth date if earlier. This can be completed at their community midwifery appointment or obstetric led antenatal appointment at 36 weeks. Women who have a history of GBS in a previous pregnancy can also be offered treatment for GBS

If GBS is detected

If GBS is identified in pregnancy through either urine cultures or vaginal swab, regardless of whether the finding was incidental, it must be followed up at the location that the test was performed e.g. Triage phone line, or community.

Results must be documented on WPAS under the 'Keynote tab'.
The adapted RCOG/GBBS leaflet should be given
The accompanying alert sticker placed on the front of the handheld notes (with maternal consent).

Bacteriological considerations

- Swabs should be taken from the **lower vagina AND the anorectum**.
- A single swab (vagina then anorectum) or two different swabs can be used
- Specimens should be transported and processed as soon as possible, if processing is delayed, specimens should be refrigerated
- Clinician should indicate that the swab is being taken for GBS on the request form.

Whom to treat

- Women with a previous baby with early or late onset GBS disease.

- ALL women in confirmed pre-term labour (less than 37 weeks).

Risk of GBS disease in preterm deliveries is 2.3 per 1000. Mortality rate from infection is increased (20-30% vs 2-3% at term).

Antibiotics to start when active labour is confirmed (i.e. >4cm dilated) and not when only suspecting preterm labour.

- **Women with positive GBS bacteriology in CURRENT pregnancy.**

No antenatal antibiotic treatment is necessary for asymptomatic women who are identified as GBS carriers on vaginal swabs taken during the pregnancy. However IAP can be offered (See "Intrapartum Care" section for treatment in labour).

Women who have confirmed GBS significant bacteriuria (GBS in Urine >10^5) should be treated, irrespective of any symptoms, as soon as the result is received. Women who have confirmed GBS bactueria, should be offered **intrapartum antibiotic prophylaxis** (IAP)

- **GBS positive bacteriology in PREVIOUS pregnancy.**

Likelihood of maternal GBS carriage in this pregnancy is 50%. Offer options of screening as above OR Intrapartum Antibiotic Prophylaxis (IAP).

Special considerations

- **Planned caesarean birth**

Women undergoing planned caesarean birth in the absence of labour or membrane rupture DO NOT require GBS antibiotic prophylaxis, irrespective of their GBS status, since the risk of neonatal GBS

disease is extremely low. However, if SROM before planned caesarean birth and known GBS will require antibiotic prophylaxis.

- **Pre labour Rupture of Membranes (PROM &PPROM)**

Women known to be colonised with GBS with spontaneous rupture of membranes at term should be offered immediate IAP and induction of labour as soon as reasonably possible.

In women colonised with GBS in this or a previous pregnancy, with preterm rupture of membranes before 34 weeks, the perinatal risks of preterm birth likely outweigh the benefits unless there are other clinical reasons for birth. After 34+0 weeks it may be beneficial to expedite birth.

Intrapartum Care

- NO ALLERGY TO PENICILLIN

3g IV Benzylpenicillin stat after onset of labour, followed by 1.5g IV Benzylpenicillin 4hourly until birth.

- ALLERGY TO PENICILLIN – NOT ANAPHYLAXIS

If history suggests an allergy to penicillins, but one that is not severe (i.e. no anaphylaxis, angioedema, respiratory distress or urticaria), then administer Cefuroxime 1.5g IV stat after onset of labour, followed by 750mg IV 8hourly until birth.

- SEVERE PENICILLIN ALERGY

1g IV Vancomycin every 12hours.

Other situations

If chorioamnionitis is suspected, broad spectrum antibiotic therapy, including an agent active against GBS should replace GBS-specific antibiotic prophylaxis (if no penicillin allergy, usually Cefuroxime and Metronidazole).

Place of birth

If confirmed GBS positive in current pregnancy women should be booked under CLC and advised to give birth on the obstetric led unit

If a woman does not wish to give birth on the obstetric led unit, she should be referred to her named community midwife / consultant midwife for individualised care planning

Labour Care

- Women with confirmed rupture of membranes and who are known GBS carriers should be offered immediate IAP and induction / augmentation of labour as soon as reasonably possible
- GBS does not influence the method of induction
- Membrane sweeping is not contraindicated
- Women who are pyrexia (38*C or greater) in labour should be offered a broad-spectrum antibiotic regimen which should cover GBS in line with local microbiology sensitivities

- Birth in a pool is not contraindicated if the woman is a known GBS carrier

- Woman with pre-term rupture of membranes: IAP should be given once labour is confirmed or induced irrespective of GBS status

- **GBS is not an indication for CTG in labour**

Care of the newborn infant

Care of the newborn infant should align with the guidance around sepsis risk calculator (SRC) and early onset sepsis (EOS), evidence shows that alignment with SRC reduced the need for antibiotics for the newborn by 74% without missing any additional cases of true sepsis. Therefore it is recommended that care of the newborn across Walesshould align with EOS reccomendations rather than NICE guidance

Babies born to mothers who are known to be carriers of GBS should be advised that observations for a minimum of 24 hours is recommended.

Following birth the paediatrician should be informed and asked to review the baby in order that SRC can be undertaken

The midwife should **contact the neonatal team if any ONE criterion of the following** in the two boxes applies either at birth or during routine observations for any reason for infants ≥34 weeks gestation:

- Rupture of membranes: > 18 hours in preterm OR >24 hours in term
- Preterm < 37 weeks Gestation
- Highest maternal pyrexia in labour > 38 ^{0}C
- Maternal GBS in current pregnancy
- Maternal antibiotics (other than prophylaxis for LSCS)

OR

- HR >160/min
- Baby temp <36 ^{0}C or ≥ 38 ^{0}C (not environmental)
- RR >60/min or apnoea
- Grunting, nasal flaring or recession
- Oxygen saturations <95%
- Altered responsiveness, persistent hypotonia, seizures, signs of shock
- Early jaundice within 24 hours of birth
- Suspected/confirmed infection in another baby with multiple pregnancy

<table>
<tr><td rowspan="2">Clinical status in first 12 hours</td><td colspan="3">Sepsis Risk Score @ birth</td></tr>
<tr><td>< 0.65</td><td>0.65 - 1.54</td><td>> 1.54</td></tr>
<tr><td>Well-Appearing</td><td rowspan="2">Observe for minimum of 24 hours on postnatal ward; Follow observation guidance using NEWTTS chart</td><td>If SRC recommends 'no culture', observe for a minimum of 24 hours on postnatal ward; Follow observation guidance using NEWTTS chart</td><td rowspan="2">Sepsis screen and treat empirically</td></tr>
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<tr><td>Clinical Illness</td><td colspan="3">Sepsis screen and treat empirically</td></tr>
<tr><td colspan="4">If at any point during observations, there is clinical worsening then perform sepsis screen and treat with antibiotics and further management as per your current practice</td></tr>
</table>

References

ROCG (2017) Prevention of Early-onset NeonatalGroup B Streptococcal Disease. Green-top guideline no.36

All Wales Neonatal Network (2019) Early Onset Sepsis Risk Assessment for Infants ≥34 Weeks Gestation
https://wisdom.nhs.wales/health-board-guidelines/swansea-bay-neonatal-file/all-wales-guideline-eos-guidance-v7-2022-pdf/

NICE (2021) Neonatal infection: antibiotics for prevention and treatment

Quick Reference Guide