GROUP B STREPTOCOCCAL DISEASE

INTRAPARTUM Quick Reference Guide

All women at 35-37 weeks gestation are to be offered screening for GBS via a LVS and a rectal swab.

PROVIDE INTRAPARTUM ANTIBIOTICS FOR WOMEN WITH:

- A positive culture
- A previous infant with GBS disease regardless of present culture
- Symptomatic or asymptomatic GBS bacteriuria of any count in current pregnancy

INTRAPARTUM ANTIBIOTIC REGIMEN:

LOADING DOSE
IV Benzyl penicillin 3g

MAINTAINANCE
IV Benzylpenicillin 1.8g every four hours until birth

WHERE THE WOMAN IS ALLERGIC TO PENICILLIN WITH NO HISTORY OF ANAPHYLAXIS/ANGIO-OEDEMA/RESPIRATORY DISTRESS OR URTICARIA
LOADING DOSE
IV cephazolin 2g

MAINTENANCE DOSE
IV cephazolin 1g every 8 hours until delivery

WHERE THE WOMAN IS ALLERGIC TO PENICILLIN WITH A HISTORY OF ANAPHYLAXIS/ANGIO-OEDEMA/RESPIRATORY DISTRESS OR URTICARIA
Clindamycin 900mg every 8 hours until delivery

IF THE WOMAN IS AT HIGH RISK OF ANAPHYLAXIS AND IF THE ISOLATE IS KNOWN TO BE RESISTANT TO CLINDAMYCIN
Vancomycin 25mg kg up to 1.5g 12 hourly until delivery (as per standard vancomycin loading doses in Therapeutic guidelines: antibiotic)

IF THE WOMAN IS AT HIGH RISK OF ANAPHYLAXIS AND IF SUSCEPTIBILITIES OF THE ISOLATE ARE UNKNOWN
Clindamycin 900 mg 8hrly (local susceptibility rate= 94.7% in 2013)
OR
Vancomycin 25mg/kg up to 1.5 g 12 hourly until delivery (local susceptibility rate 100%)
WHERE THE WOMAN IS ALLERGIC TO BOTH PENICILLIN AND CLINDAMYCIN
Vancomycin 25mg/kg up to 1.5g 12hourly until delivery.
Consult with the microbiologist on call if vancomycin is unsuitable.

SPECIAL NOTES

- These recommendations are for GBS colonisation only and do not apply to women with overt sepsis.
- To achieve maximum preventative effect, the first dose of antibiotics should be administered at least four hours prior to birth.
- In case of induction with Foley’s catheter, prostin gel or cervadil, in a GBS positive woman, commence antibiotics at the insertion of catheter or prostaglandin.

BACKGROUND INFORMATION

Group B streptococcus (GBS) emerged as the leading cause of early onset neonatal sepsis in the late 1970’s. Approximately 15-25% of women will be asymptomatic carriers of Group B streptococcus of which, if left untreated, 1 in 200 will have neonates that will develop neonatal sepsis.

The use of intrapartum prophylaxis with antibiotics (penicillin) given to women at risk of transmission of GBS to their newborns, prevents early onset sepsis and is cost effective. In Australia, intrapartum chemotherapy has led to a decline in the incidence of early onset GBS disease in the past decade. The incidence of late onset GBS infection (7 – 89 days) remains unchanged.

Intrauterine infection of the fetus occurs due to ascending GBS. Fetal aspiration of infected amniotic fluid can lead to stillbirth, neonatal pneumonia, or sepsis. Neonates can become infected during the passage of birth, although the majority who are exposed become colonised on their skin or mucous membranes, but remain asymptomatic. Urinary tract infections caused by GBS complicate 2%-4% of pregnancies, and it is recommended that women be treated with intrapartum chemoprophylaxis because the neonate is at increased risk for early onset GBS infection.

GBS isolates can be assumed to be 100% susceptible to penicillin, amoxicillin, cephazolin and vancomycin. Clindamycin susceptibility varies between countries. In Australia GBS resistance to clindamycin is relatively low, local resistance rates are approximately 5%.

New evidence suggests the CDC vancomycin dose of 1g 12 hourly may not provide effective antimicrobial levels in mother or baby. Standard loading doses as per Therapeutic Guidelines; Antibiotic have been recommended in the KEMH guideline.

Penicillin administered to a woman with no history of β-lactam allergy has a risk of anaphylaxis of 4:10,000 to 4:100,000. Mortality is rare in a fully medically staffed hospital setting. Any morbidity associated with anaphylaxis is greatly offset by reduction in incidence of neonatal and maternal sepsis.
KEY POINTS

1. All antenatal women should be offered screening at 35 – 37 weeks gestation for rectovaginal GBS colonisation via a combined low vaginal and anorectal swab. Culture results are less predictive of status at term if performed at earlier gestations. This swab can be clinician collected or patient self-collected.

2. Screening results are current for 5 weeks.3

3. GBS culture results are not available for 24 – 48 hours; cultures are not useful in the initial management of labour with an unknown current status.

4. Adequate intrapartum chemoprophylaxis is defined as penicillin (or other appropriate antibiotic cover if allergic to penicillin) for ≥ 4 hours prior to birth.1

5. Among women with penicillin allergy, sensitivity testing should be requested at the time of screening culture.

6. When it is impractical or inappropriate to collect swabs for assessment of GBS colonisation, then assessment for risk factors strategies should be initiated, and chemoprophylaxis commenced as required.3

7. Intrapartum prophylactic antibiotics should be given for women with:
   • a positive GBS culture
   • symptomatic or asymptomatic GBS bacteriuria (and of any count) during pregnancy
   • a history of a previous neonate with GBS disease regardless of the present culture result.5 3 Rescreening is not required in the current pregnancy.2
   • an unknown culture or current status at the time of labour and any of the following
     o gestation < 37 weeks
     o membranes are ruptured ≥ 18 hours,

8. Intrapartum antibiotic prophylaxis is not required for women:
   • Caesarean birth performed before the onset of labour on a woman with intact amniotic membranes, regardless of GBS colonisation status or gestational age.

9. Women who are GBS positive with planned induction of labour (IOL) should commence antibiotic treatment at insertion of Foley’s catheter / prostaglandin gel / cervadil.

10. GBS positive women requiring IOL and whom oxytocin may present additional risk (i.e. Grand multiparty, previous caesarean section) should commence treatment five days prior to IOL with oral penicillin or clindamycin. Repeat GBS screening 48 hours prior to IOL. If the repeat swabs are negative it allows the option of performing artificial rupture of membranes only and waiting.

RISK FACTORS FOR NEONATAL GBS SEPSIS

These include:
   • a positive culture for GBS within 5 weeks of birth
   • a previous neonate with GBS disease regardless of a present culture
   • symptomatic or asymptomatic GBS bacteriuria regardless of count during the current pregnancy
   • an unknown culture result, or no screening in pregnancy and any of the following are present –
     ➢ the onset of premature labour < 37 weeks gestation
     ➢ rupture membranes for ≥ 18 hours
     ➢ an intrapartum fever of ≥ 38 degrees Celsius. Significant intrapartum fever requires consideration of broader spectrum therapy such as amoxicillin 2g IV 6 hourly, metronidazole IV 500mg 12 hourly and gentamicin 5mg/kg once a day.
COLLECTING SWABS GBS SCREENING

See Clinical Guidelines Low Vaginal, High Vaginal, Endocervical and Rectal swabs.

METHOD OF SWAB COLLECTION

1. Women may collect their own GBS swabs following appropriate instruction. The midwife or doctor should perform swab collection when there are any language or communication difficulties.

2. For the single-swab method, the lower one third of the vagina is swabbed circumferentially with a cotton swab that is then inserted through the anal sphincter, 2cm into the rectum, and rotated 360 degrees. A two swab technique can be used.

3. Clindamycin susceptibilities should be requested where there is a known history of penicillin allergy.

MANAGEMENT OF GBS POSITIVE WOMEN WITH PRELABOUR RUPTURE OF MEMBRANES AT TERM

See Clinical Guidelines Prelabour rupture of membranes at term. Known carriers of GBS with prelabour rupture of membranes at term should commence antibiotics and induction commenced within 6 hours.

MANAGEMENT OF A WOMAN PRESENTING WITH PRETERM RUPTURE OF MEMBRANES (PROM) WITH UNKNOWN GBS STATUS

Obtain vaginal and rectal GBS swabs for culture. Commence prophylaxis antibiotics (oral erythromycin) as per the preterm prelabour rupture of membranes guideline, KEMH Clinical Guideline ‘Prelabour premature rupture of membranes medical and midwifery management’ If the patient labours, switch antibiotic regime to IV penicillin as per preterm labour guideline.

WOMEN IN FAMILY BIRTH CENTRE AND COMMUNITY MIDWIFERY PROGRAM

The midwife will:

- confirm the woman has no penicillin allergy
- obtain the order for antibiotics from the medical practitioner
- insert an intravenous cannula and commence antibiotics as per recommendations for prophylaxis and medical practitioners orders.

MANAGEMENT OF A NEWBORN AT RISK OF GBS SEPSIS

See Neonatology Clinical Guidelines Section 8 - Group B Streptococcal Disease (pages 5-7)
REFERENCES (STANDARDS)


National Standards – 1 Clinical Care is Guided by Current Best Practice
Legislation - Nil

Related Guidelines / Policies
Clinical Guidelines Low Vaginal, High Vaginal, Endocervical and Rectal swabs
Clinical Guidelines Prelabour rupture of membranes at term
Neonatology Clinical Guidelines Section 8 - Group B Streptococcal Disease

Other related documents – Nil

RESPONSIBILITY
Policy Sponsor | HoD Microbiology
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Initial Endorsement | October 2001
Last Reviewed | October 2014
Last Amended | October 2017
Review date | October 2017