Group B Streptococcus

Excerpt from The Midwifery Group, Vancouver, BC, www.midwiferygroup.ca

Tres Lunas Midwifery

What is Group B Streptococcus (GBS)?

GBS is part of the normal bacteria that is found in the digestive systems of healthy people. Approximately 10-30% of women will have GBS in their vaginas at the time of birth. GBS colonization in the vagina is asymptomatic and rarely causes any maternal complications but can cause a very serious infection if acquired by newborns before or during birth.

GBS and the Newborn

Due to the immature immune systems of many newborn babies, early-onset GBS disease (occurring in the first week of life) occurs in 0.34-0.37 per 1000 babies, and causes serious illnesses such as meningitis, pneumonia and/or sepsis. 4%-6% percent of infected babies will die. Late-onset disease is much less common and occurs in babies between one week and three months old.

Risk Factors for Neonatal GBS Disease

- Women with a positive GBS culture (>25 times more likely to have a baby with GBS disease.)
- Preterm labor (less than 37 weeks)
- Rupture of membranes for greater than 18 hours
- Maternal fever in labor (>100.4F)
- GBS bacteria found in urine anytime in this pregnancy (considered heavy colonization)
- History of a previous baby that developed GBS disease

GBS Screening and Treatment

The current recommendation for the prevention of GBS disease is that all pregnant women are offered a vaginal-rectal swab between 36-37 weeks. Since GBS colonization can come and go, testing within five weeks of the birth is shown to be predictive of GBS status at the time of birth. Each woman can do the swab herself, and results are available in 72 hours.

If the screening test is *positive*, the American College of Obstetricians and Gynecologists recommends IV antibiotics in active labor or when the water breaks. Penicillin is the antibiotic of choice, unless known penicillin allergies exist. Ideally, you will receive two doses four hours apart to have maximum protection, though if your labor is too fast, there is still benefit to having only a single dose. If your water breaks before you are in labor, IV antibiotics along with induction of labor is the current medical standard.

If the screening test is *negative*, you most likely do not carry GBS and IV antibiotics are not necessary. However, in a study of GBS infected babies born at term 61.4% of the mothers had tested negative for GBS.[i]

Some studies have looked at the ability of chlorahexadine vaginal washes to reduce the transfer of GBS. Thus far it has not been proven effective at preventing early-onset disease.

Benefits of Antibiotic Treatment

• 1 in 500 newborns will develop GBS disease if the mother has an unknown GBS culture result and no antibiotics in labor are given.
• 1 in 1000 newborns will develop GBS disease if the mother has a known negative GBS culture with one risk factor.
• 1 in 200 newborns will develop GBS disease if the mother has a known positive GBS culture, no additional risk factors and no antibiotics in labor are given.
• 1 in 20 newborns will develop GBS disease if the mother has a known positive GBS culture, no antibiotics are given and she has any risk factors during labor.
• 1 in 4000 newborns will develop GBS disease if the mother has a known positive GBS culture and receives one dose of antibiotics four hours before birth.
• 1 in 20 000 newborns will develop GBS disease if the mother has a known positive GBS culture and receives two doses of antibiotics before birth.

Risks of Antibiotic Treatment

• The risk of allergic reaction to penicillin is between 4 and 40 in 100 000.
• Exposure to antibiotics in labor has been associated with an increased incidence of yeast and thrush infections in moms and babies.
• Wide spread use of antibiotics could lead to superbugs that are antibiotic resistant.
• New evidence suggests that early exposure to antibiotics may be linked to asthma in small children.
• Penicillin is often painful and is expensive (approximately $50/dose).

GBS and Homebirth

You can still have a homebirth if you are GBS positive. We can offer 24 hours of antibiotic therapy at home after which we recommend hospital transport.

Prevention

Although there are no studied methods to prevent GBS colonization in women, here are some ideas to try that might be helpful.
•Always wipe from front to back after using the toilet.
•Take a daily form of probiotics containing anywhere from 4-20 billion units of mixed flora. (Look for Megaflora or Jarro-Dophilus)
•Reduce the amount of sugar and refined carbohydrates you eat.

How Will You Know if Your Baby is Infected?

Babies who get sick from GBS almost always do so in the first 24 hours after birth. Symptoms include difficulty breathing (including grunting, panting), apnea (not breathing), having bluish skin color, fever or low temperature, extreme sleepiness/lethargy or irritability, or difficulty feeding.

More information

•Ask us for our packet of information about GBS.
• http://www.cdc.gov/groupbstrep/index.html
• http://www.cochrane.org/search/site/ Do a search for "Group B Streptococcus"

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[i] VanDyke, et.al, Evaluation of Universal Screening for GBS. NEJM, 360:25, 2626-36, 2009.