GBS Screening, Treatment, and Informed Consent

Group B Streptococcus is a bacteria that normally resides in the gastrointestinal tract and sometimes colonizes the vagina during pregnancy. Of women who are pregnant, 10% to 30 % will develop Group B Strep colonization in their rectum and/or vagina, which can be transient, chronic, or coming and going. In most cases, there is no outcome of newborn infection with GBS colonization (Frye, A., 2007).

Why is GBS Colonization Important to Consider?

- Infection from GBS is a main cause of sepsis in the neonate in the U.S. If there is GBS colonization of the vagina and or rectum during the birthing process, with no antibiotic treatment during labor (Marshall, J., Raynor, M., 2020):
    - 10 in 1,000 term newborns will develop sepsis
    - 40 in 1,000 premature newborns will develop sepsis (Frye, A. 2007)

Screening for GBS colonization

The most accurate screening method for GBS colonization consists of a culturing technique between 35 and 37 weeks gestation. Cultures include swabs of the vaginal and rectal mucosa. Specimens are labeled specifically for GBS and sent to the lab.

What is known about colonization of GBS and newborn susceptibility:

- In women who are heavily GBS colonized: there is an 87.8% chance of passing colonization to newborns during the birthing process
- In women who are moderately GBS colonized: there is a 50% chance of passing colonization to newborns during the birthing process
- For women who are lightly GBS colonized: there is a 30% chance of passing colonization to newborns during the birthing process (Frye, A., 2007)

Conventional Treatment for GBS

The CDC suggests that those who test positive for GBS during pregnancy or who have tested positive for GBS in previous pregnancies receive IV antibiotics every 4 hours beginning over 4 hours before birth. (Dekker, R., July 17, 2017)

Benefits (for the neonate) of IV Antibiotic Treatment during labor for those with GBS Colonization

- In 2013, it was found that when women with GBS colonization were treated during labor with ampicillin or penicillin more than 4 hours in advance of birth, effectiveness at preventing sepsis in the newborn was 89% (Dekker, R., July 17, 2017).

Risks of GBS Treatment

There is at least a temporary impact on the gut microbiome of infants following the suggested antibiotic treatment to prevent sepsis from GBS colonization during labor. In the only study that followed infants for a year after the mother recieved IV antibiotic treatment 4 or more hours before birth took place for GBS colonization, it was found that:

- At 3 mos of age, antibiotic exposed infants had a decreased level of beneficial bacteria

- At 3 mos of age, antibiotic exposed infants had a reduced richness of microbiome (regardless of whether or not they were breastfed exclusively)
- At 1 year of age, most differences were absent (suggesting that the microbiome deficiencies were short term)
- In infants born by unplanned cesarean who were not breastfed for at least 3 mos, some negative impacts on the microbiome persisted past the year (Dekker, R., July, 2017)

Other Risks Factors Associated With GBS Treatment:

- 1 in 10,000 severe allergic reactions (Frye, A., 2007)
- 1 in 100,000 fatal allergic reactions (Frye, A., 2007)
- More incidence of yeast infection for the mother and the infant (15% for the antibiotic exposed dyad, as opposed to 7% for the non exposed dyad) (Dekker, R., 2017)
- Side effects that are related to antibiotic use (Dekker, R., 2017)

Alternatives to Antibiotic Treatment for GBS Colonization

Chlorhexidine (otherwise known as Hibiclens)

This is a topical disinfectant which is known to kill bacteria upon contact. In the studies available, it has been found that chlorhexidine may be better than nothing, but does not prevent the traveling of GBS into the amniotic fluid unless given before waters break and repeated before its effects diminish. There is no evidence that chlorhexidine prevents transmission to the fetus before birth (Dekker, R., 2017)

Garlic

Some websites and birth professionals suggest putting garlic in the vagina to eradicate GBS before testing. In a petri dish, garlic was able to destroy GBS in 3 hours, but this has not been proven effective in people yet. Also important to note is that even if GBS colonization diminishes from the garlic treatment, it may reappear after the testing. There is little evidence on the benefits and harms of garlic treatment for GBS colonization (Dekker, R., 2007).

Probiotics

Taking Lactobacilli probiotics might decrease chances of becoming colonized with GBS. In 2016, researchers found that 43% of those who were GBS positive between 35-37 weeks gestation and who took probiotics for 3 weeks were then GBS negative when they later retested compared to 14% who did not take probiotics. More research is needed, but probiotics show promise at effecting GBS colonization during pregnancy if consistently taken in the weeks leading up to birth (Dekker, R., 2007).

In another study, vaginal lactobacilli significantly slowed the growth of GBS strains in a petri dish (Dekker, R., 2007).

In a small scale clinical trial, when pantyliners soaked in probiotics were worn, there were diminished levels of GBS (Dekker, R., 2007)

Suggested regimen from Heart & Hands for those who are GBS positive :

probiotics 2x per day (foods such as raw sauerkraut, kefir, kimchi)

Echinacea- 700mg daily - 3days on and off

Garlic 1000 mg daily by mouth

We support your right to make informed decisions!

I have discussed the above topics with my midwife and I understand the risks involved with Group B Strep Colonization in women and the potential ramifications in the fetus and newborn. I understand how GBS colonization is tested for and how it is treated. I have asked any needed questions to help with my understanding of the above topics. I accept entire responsibility for my decisions as well as for the potential risks and outcomes for me and my baby. At this time, I am choosing:

- ☐ Standard GBS testing
- ☐ IV Antibiotic Treatment for GBS colonization
- ☐ Probiotic Protocol for GBS colonization
- ☐ I choose an alternative method for safeguarding against GBS colonization and prenatal/intrapartum prevention of newborn sepsis as follows:
  _____
  _____
  _____
- ☐ I decline testing for GBS colonization
- ☐ I decline treatment for GBS colonization and intrapartum prevention of newborn sepsis

_____

Client's Signature Date

_____

Midwife's Signature Date

References:

Frye, A. (2007). *Understanding diagnostic tests in the childbearing year.* (pp 743, 746, 747). Labrys Press.

Dekker, R. (July 7, 2017). The evidence on: Group B strep. Evidence Based Birth. Evidence on Group B Strep in Pregnancy (evidencebasedbirth.com)

Natural Prevention of GBS Bacteria

Take daily to reduce GBS Bacteria Counts

-Apple Cider Vinegar Capsules Orally and as a diluted rinse of vaginal area and rectum
-Probiotics orally or as a suppository
(One in the morning and one at bedtime)
-Garlic capsules or cloves orally
-2000 mg Vitamin C daily
-Eat Fermented Foods like Kombucha or sauerkraut
-2 tbs Coconut oil daily internally