

Group B Streptococcal Infections

Summary

Group B streptococci (*Streptococcus agalactiae*) cause disease in people of all ages, but are typically a major cause of perinatal infections, including bacteremia, intra-amniotic infection and endometritis in pregnant and postpartum women, as well as systemic and focal infections in neonates and young infants. Group B strep (GBS) bacteria commonly live in people's bodies and typically are not harmful, but sometimes the bacteria invade sterile sites, such as blood or spinal fluid, and cause severe infections. How people spread GBS bacteria to others is generally unknown. However, pregnant women can pass the bacteria to their babies during delivery.

Agent

Streptococcus agalactiae, group B β -hemolytic streptococci.

Transmission

Reservoir:

Humans are the only reservoir for *S. agalactiae*.

Mode of transmission:

- GBS colonize the human gastrointestinal and genitourinary tracts, and less commonly the pharynx. Most often intrapartum transmission via ascending spread of bacteria from the vagina occurs. Although unlikely, health care professionals or visitors may aid in transmission of GBS, but in most cases mode of transmission of disease in non-pregnant adults is not completely known.

Period of communicability:

- Transmission from mother to infant generally occurs shortly before or during delivery in mothers who are colonized with GBS bacteria.

Clinical Disease

Incubation period:

The incubation period of early-onset disease (EOD) is fewer than 7 days. For late-onset disease (LOD), the incubation period is variable.

Illness:

In newborn infants, EOD usually occurs within the first 24 hours after birth (range, 0 through 6 days), presenting with respiratory distress, apnea, shock, pneumonia, and less often, meningitis. LOD, which typically occurs at 3 to 4 weeks of age (range, 7 through 89 days), commonly manifests as bacteremia or meningitis and other focal infections, such as osteomyelitis. The most common GBS infections among non-pregnant adults include bloodstream infections, pneumonia, and skin and bone infections.

Laboratory Diagnosis

The diagnosis of GBS (*S. agalactiae*) is established by isolation of GBS (*S. agalactiae*) from a normally sterile site (e.g., blood or cerebrospinal fluid or, less commonly, joint, pleural, or

pericardial fluid) OR pathogen specific nucleic acid detected in a specimen obtained from a normally sterile body site, using a validated molecular test.

Treatment

No effective strategy has yet been identified for how to prevent late-onset disease or adult disease. High-dose antimicrobial therapy is required for invasive GBS infections and is determined by age. Initial empiric treatment for newborn infant ≤ 7 days of age with early-onset GBS infection is penicillin G or ampicillin. For empiric therapy of late-onset GBS disease in infants 8 through 28 days of age who are not critically ill, ampicillin plus either gentamicin or cefotaxime are recommended. For infants 29 to 90 days of age, ceftriaxone is recommended. (Refer to American Academy of Pediatrics. 2021-2024 Red Book: Report of the Committee on Infectious Diseases, 32nd Edition. Illinois, Academy of Pediatrics, 2021 for specific recommendations). Treatment decisions should ultimately be made by the patient's health care provider.

Surveillance

Case Definition:

Confirmed – A clinically compatible case that is laboratory confirmed.

Probable – Clinically compatible signs and symptoms with a clinical diagnosis of GBS in a newborn up to 28 days after birth, whose mother has laboratory confirmation of GBS from a lower vaginal or anorectal specimen or from a normally sterile site.

Reporting:

Report all suspected, probable or confirmed cases to the Epidemiology and Response Division (ERD) at 505-827-0006. Information needed includes patient's name, age, sex, race, ethnicity, home address, home phone number, occupation, and health care provider.

Case Investigation:

Use the Bacterial Meningitis Invasive Respiratory Disease (BMIRD) Form to complete the investigation. Information should also be entered into NM-EDSS per established procedures.

Control Measures

The most important means of prevention of developing GBS disease is prompt identification and treatment of infections.

1. Case management
 - 1.1. It is important to begin IAP or treatment as soon as possible. Pregnant women who test positive for GBS bacteria may not display symptoms of GBS infections, but they are at increased risk for passing the bacteria to their babies during birth.
2. Contact management
 - 2.1. Not applicable as other people who live with someone who has GBS bacteria, including other children, are not at increased risk of getting sick.

3. Prevention

3.1. Antibiotics given to women who are at increased risk of having a baby who will develop GBS disease will protect babies from infection, if given during labor. The rate of colonization of GBS organisms in the vagina or rectum of pregnant women ranges from 15% to 35%, and implementation of maternal intrapartum antibiotic prophylaxis (IAP) prevents early onset GBS disease. Most babies born to women who tested positive for GBS bacteria do not need treatment if their mother received antibiotics during labor.

3.2. Immunization: Not currently available.

3.3. Nosocomial transmission of GBS has been identified related to improper infection prevention and control practices in delivery rooms and nurseries. Ensure routine practices are followed during hospitalization.

References

American Academy of Pediatrics. Kimberlin, DW ed. 2021-2024 Red Book: Report of the Committee on Infectious Diseases. 32nd ed. Elk Grove Village, IL: American Academy of Pediatrics; 2021.

Centers for Disease Control and Prevention. (2022). Group B strep (GBS). <https://www.cdc.gov/groupbstrep/index.html>. (Accessed 9 May 2023).

See Invasive Group B *Streptococcus* Fact Sheet ([English](#)) ([Spanish](#)).