

# Stroke patterns in neonatal group B streptococcal (GBS) meningitis

childhood  
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## Overview

Meningitis is a disease caused by either bacteria or viruses that causes inflammation of thin tissues that cover the brain and spinal cord. Bacterial meningitis, which is rarer but much more severe than viral meningitis, can block the blood flow to the brain and lead to stroke. This condition can then lead to serious neurological problems, such as brain damage, hearing loss, or learning disabilities. To better understand how bacteria can cause this damage, researchers identified two unique, recognizable patterns of brain injury caused by a specific bacterium, group B streptococcus (GBS). By using this information, they hope that prevention strategies can be designed to lessen the damage caused by GBS meningitis.

## About the study

This study used a total of 8 newborns who had: (1) bacterial meningitis, (2) acute group B streptococcal infection, (3) a brain MRI within the previous 14 days, and (4) acute intraparenchymal focal infarctions (restricted diffusion). Clinical presentations, investigations, and neurological outcomes were recorded for all subjects.

## What families should know

During pregnancy, make sure you get screened for GBS (usually around 35-37 weeks into your pregnancy), as you can pass on this meningitis-causing bacteria to your infant during labor. If you are found to have GBS, treatment with antibiotics during labor can reduce the risk of your infant getting GBS by more than 50%. Some symptoms of bacterial meningitis in newborns include: inactivity, vomiting, irritability, poor feeding, and seizures. If you suspect your infant may have meningitis, get medical attention immediately.

## What practitioners should know

Screen all pregnant women for GBS around 35-37 weeks of gestation. Distinct patterns of focal infarction for GBS meningitis were: (1) deep perforator arterial stroke to basal ganglia, thalamus, and periventricular white matter, and (2) superficial injury with patchy, focal infarctions of the cortical surface. Antithrombotics may be an effective form of treatment against strokes in neonates with meningitis, but more research is required.

## Reference

[Hernández, M. I., Sandoval, C. C., Tapia, J. L., Mesa, T., Escobar, R., Huete, I., Wei, X.C., Kirton, A. \(2011\). Stroke patterns in neonatal group B streptococcal meningitis. \*Pediatric neurology\*, 44\(4\), 282-288.](#)