Campylobacter

- Handmade Draping System for Table-top Microscopes in Wet Lab Training: Technical Note
- Whole-Genome Metagenomic Analysis of the Oral Microbiota in Patients with Obstructive Sleep Apnea Comorbid with Major Depressive Disorder
- Management of a Large Cerebral Abscess in Children Caused by Campylobacter gracilis: A Case Report and Review of the Literature
- Gut microbiome in intracranial aneurysm growth, subarachnoid hemorrhage, and cerebral vasospasm: a systematic review with a narrative synthesis
- Higher abundance of Campylobacter in the oral microbiome of Japanese patients with moyamoya disease
- Campylobacter fetus seeding of a cavernous malformation resulting in brain abscess: case report and literature review
- Fatal case of subdural empyema caused by Campylobacter rectus and Slackia exigua
- Campylobacter jejuni subdural hygroma infection in a 2-year old boy: case report and a brief literature review

Campylobacteria, commonly referred to as Campylobacter, are a genus of bacteria known to cause foodborne illnesses, primarily campylobacteriosis. These bacteria are among the most common causes of bacterial gastroenteritis worldwide.

Key Characteristics of Campylobacter Morphology:

Campylobacter species are Gram-negative, spiral-shaped, and motile due to the presence of flagella. Species:

The most common species causing human illness are Campylobacter jejuni and Campylobacter coli. Habitat:

These bacteria are commonly found in the intestines of birds (especially poultry), cattle, pigs, and other animals. They are often present in raw or undercooked meat, particularly poultry. Pathogenesis and Symptoms Transmission:

Campylobacter is primarily transmitted to humans through the consumption of contaminated food or water, contact with infected animals, or exposure to their environments. Unpasteurized milk and untreated water can also be sources. Infection Mechanism:

Once ingested, Campylobacter invades the intestinal lining, causing inflammation and gastroenteritis. Symptoms:

Symptoms typically appear 2 to 5 days after exposure and can include: Diarrhea (often bloody) Abdominal pain and cramps Fever Nausea and vomiting Most infections are self-limiting and resolve within a week, but severe cases can occur, especially in immunocompromised individuals, young children, and the elderly. Complications In some cases, Campylobacter infection can lead to more severe complications such as: Guillain-Barré Syndrome (GBS): A rare autoimmune disorder that can cause muscle weakness and paralysis. Reactive Arthritis: Joint pain and inflammation that can occur after the infection has resolved. Bacteremia: The presence of bacteria in the bloodstream, which can lead to more severe systemic infections. Diagnosis and Treatment Diagnosis:

Diagnosis is typically made through stool culture or molecular methods like PCR to identify the presence of Campylobacter DNA. Treatment:

Most cases do not require specific treatment beyond supportive care (hydration and rest). In severe cases or for high-risk patients, antibiotics such as azithromycin or fluoroquinolones may be prescribed. Prevention Preventing Campylobacter infection involves proper food handling and cooking practices:

Cook Poultry Thoroughly: Ensure that poultry is cooked to an internal temperature of at least 165°F (74°C). Avoid Cross-Contamination: Use separate cutting boards and utensils for raw and cooked foods. Wash Hands: Thoroughly wash hands with soap and water after handling raw meat, after contact with animals, and before eating. Drink Safe Water: Avoid drinking untreated water and consume only pasteurized milk and dairy products. Conclusion Campylobacter is a significant cause of foodborne illness, with various preventive measures that can effectively reduce the risk of infection. Understanding the biology, transmission, and prevention strategies is crucial for managing and reducing the impact of Campylobacter-related diseases.

The genus Campylobacter and Campylobacter ureolyticus may be associated with the rupture of cerebral aneurysms [1] No article has evaluated microbiota in relation to cerebral vasospasm following aSAH although there is an ongoing study. We concluded that intestinal microbiota might be a potential target for diagnostic and therapeutic tools to improve the management of cerebral aneurysms. However, more studies of prospective design are needed [2]

Campylobacter gracilis

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1)
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2)
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