



Mystery Case #1 | Diarrhea That Just Won't Quit

Discussion

- **Intestinal spirochetosis**, caused by *Brachyspira pilosicoli* and less commonly *Brachyspira aalborgi* which are slow-growing anaerobic spirochetes
- Common animal enteric pathogens occasionally seen in humans
- When seen in humans, it is most prevalent in developing countries, and among MSM and HIV-positive patients
- Transmission is presumed to be fecal-oral, but may also be sexually transmitted
- Appears to be more common in children; can be a cause of failure to thrive
- Infection can be asymptomatic or cause chronic diarrhea, abdominal pain, bloating, and rectal bleeding

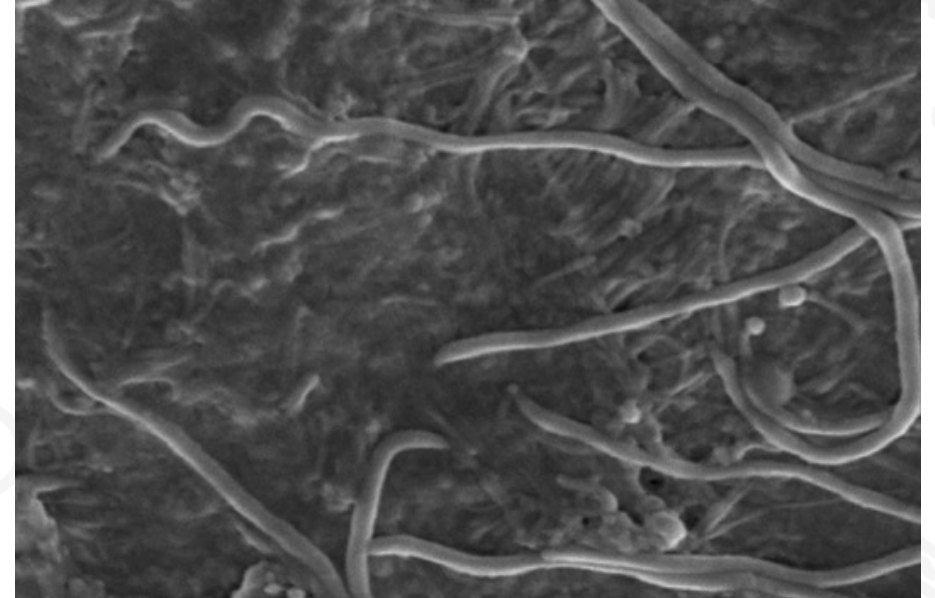
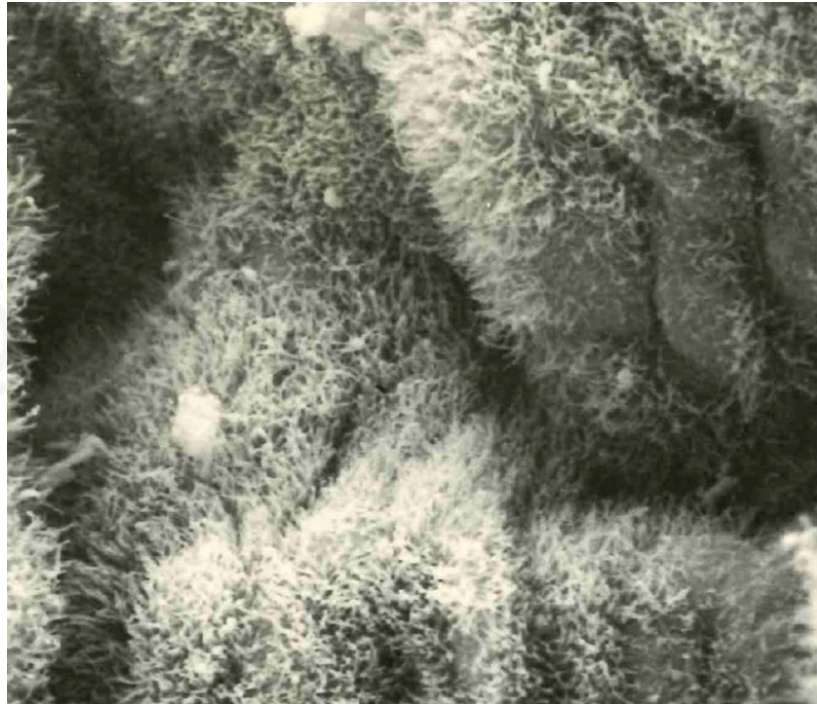
CLUE
#4



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Scanning electron microscope images of spirochetes attached to the luminal surface of the colon in a pig (left) and cultured cells (right)

**CLUE
#4**



Hampson DJ. The Spirochete *Brachyspira pilosicoli*, Enteric Pathogen of Animals and Humans. Clin Microbiol Rev. 2017;31(1):e00087-17. Published 2017 Nov 29. doi:10.1128/CMR.00087-17



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Discussion (cont.)

- Colorectal biopsies will demonstrate spirochetes attached to the epithelial surface forming a “false brush border”
- Warthin-Starry staining can confirm the presence of spirochetes
- Limited in vitro antimicrobial susceptibility data, one study demonstrated susceptibility to ceftriaxone, chloramphenicol, meropenem, moxifloxacin, metronidazole, and tetracyclines.
- Metronidazole generally recommended as the drug of choice for treatment with a variety of treatment doses and durations, but typically 10 to 14 days

CLUE
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Key Points

- The differential for chronic diarrhea is BROAD, and sometimes multifactorial – important to consider intestinal spirochetosis especially in our MSM patients or patients with HIV
- IS is most commonly caused by *Brachyspira pilosicoli*
- Diagnosis can be confirmed by colonic biopsies demonstrating a “false brush border” on Warthin-Starry staining
- No established drug of choice or duration of therapy for IS

CLUE
#4