CLINICAL VIGNETTE

A Case of Sexually Acquired Campylobacter Infection through Analingus

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Case Presentation

A 34-year-old cis-gender gay male with no significant past medical history presents with 4 days of acute diarrhea and abdominal pain. Patient reported up to 6 non-bloody, non-mucous, non-foul-smelling bowel movements per day. They started as loose stools and became clear watery diarrhea. He denies any nausea, vomiting, subjective fevers or chills. Patient also reports a 3/10 paraumbilical abdominal pain that is sharp in quality without radiation. He denies any unusual food intake. He ate a burger and nachos a day ago with others without similar symptoms. He denies consumption of unpasteurized or undercooked foods as well as any recent antibiotics or hospitalizations. He works as an events manager, works primarily from home and has no recent travel or hiking trips. He did note a trip to Hawaii a few months prior. He denies any contact with animals or animal products, denies food allergies, or family history of gastrointestinal or endocrine conditions. His sexual history, includes three recent sexual partners including oral-anal contact, a few days to weeks prior to symptom onset. He was previously on emtricitabine/tenofovir disoproxil (TDF/FTC) for HIV prevention but has stopped this medication.

On examination, his abdomen was soft, nontender, nondistended, without guarding or rebound. He was hemodynamically stable and afebrile. Comprehensive metabolic panel was all within normal limits. Erythrocyte sedimentation rate was normal and C-reactive protein was elevated to 2.7. HIV RNA PCR test was undetectable. A comprehensive stool evaluation included a parasitic enteric pathogen panel which was negative for giardia or entamoeba. A bacterial enteric pathogen panel was negative for shigella or salmonella but returned positive for campylobacter species. He was treated with azithromycin 500mg daily for three days and symptoms resolved.

Discussion

The CDC estimates 1.3 million people in the United States become ill from Campylobacter every year.[1] Campylobacter organisms are gram-negative, rod-shaped bacteria with an estimated infection incidence of 14.3/100,000 in North America.[2] There are 26 known species and specifically, Campylobacter Jejuni and Campylobacter coli represents majority of the gastroenteritis cases worldwide. Symptoms often include acute onset of watery diarrhea or bloody stools, fever, weight loss, and abdominal cramps, nausea, vomiting that lasts up to 6 days. Risk factors for Campylobacter infections include younger age (1-4 and 15-24 years old), travel to developing areas with limited sanitation resources and consumption of undercooked poultry products, unpasteurized milk, and water.[3] Immunodeficiency is also a risk factor. For example, HIV-infected patients presenting with diarrhea are more frequently infected with Campylobacter than uninfected individuals with diarrhea. Specifically, campylobacter jejuni has been known to be associated with the development of Guillain Barre Syndrome and the Miller Fisher variant. Other campylobacter species infections have also been associated with increased incidence of inflammatory bowel disease, gastroesophageal reflux disease, and through modest-sized studies, colorectal cancer.[3,4]

Recent literature suggests other risk factors for campylobacter infection. Several studies have highlighted campylobacter infections in men who have sex of with men (MSM). A retrospective study in Seattle reports that of the 235 MSM patients who presented with gastroenteritis, 57.5% had a positive stool test with 88.7% of the positive stool tests detecting three bacterial pathogens Escherichia coli 33.1%, Shigella 30.5%, and Campylobacter 17.2% of positive samples.[4] Another study reported MSM has higher likelihood of campylobacter infections than controls, consistent with sexual contact being a risk factor.[5] Current IDSA guidelines recommend empiric antibiotics in immunocompetent adults who show signs of bacillary dysentery primarily to treat presumptive shigellosis with macrolides (azithromycin 500mg daily for three days) and fluoroquinolones (levofloxacin 750mg daily or ciprofloxacin 750mg orally twice daily, each for three days until signs and symptoms of disease have improved.[3] Individuals with complications or immunosuppression may warrant a longer course (7 to 14 days). Although both antibiotics are highly effective against susceptible isolates, rates of fluoroquinolones resistance are increasing worldwide and generally exceed those for azithromycin.[6] Specifically, MSMs infected with campylobacter coli, showed high rates of multidrug resistance strains to fluoroquinolones and macrolides circulating within the MSM community. Optimal management of infections caused by macrolide and fluoroquinolone-resistant strains is not established. Fosfomycin has been suggested as a possible alternative therapeutic agent.[7]

Conclusion

Most cases of acute infectious diarrhea are viral. However, in one community study of severe diarrhea $\geq$ 4 fluid stools per day for more than three days, bacterial causes were responsible for

87% of the cases.[8] Campylobacter species are amongst the most common enteric bacterial pathogens worldwide and most cases are self-limiting and mild. However, since multidrug resistance is common and campylobacteriosis can have associated extra-intestinal manifestations, close attention to patient follow-up is important.

Receptive anal or oral intercourse increases risk of direct inoculation or oral-fecal transmission of bacterial and parasitic pathogens such as Shigella, Giardia and Entamoeba histolytica. We present a case of sexually transmitted campylobacter enteritis. Since men who are sexually active with men (MSM) are at an increased risk of sexually transmitted enteric infections,[7,9] healthcare providers should obtain thorough, comprehensive and culturally humble sexual histories with their patients to identify other risk factors when evaluating infectious caues of acute diarrhea.

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