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CLINICAL VIGNETTE

Case of H Pylori in a Patient with Chronic Diarrhea

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A 20-year-old Caucasian female presented with intermittent diarrhea for 7-8 months, sometimes associated with abdominal cramps and left lower abdominal pain. The watery diarrhea was not triggered by eating and occurred 3-4 times a week.

She tried avoiding dairy with no improvement. She had no history of travel to overseas, had no pets, and drank only bottled or tap water. She denied weight loss, fever, nausea and vomiting. There was no blood in stool and she had no skin rash. There was no significant past medical or surgical history. Family history was positive for diabetes in father and hypothyroidism in mother. She lived with her husband who was healthy and free of abdominal pain or diarrhea. She was not taking any medicines, did not smoke nor use illicit drugs.

Vital signs showed blood pressure of 110/65 mm/hg, pulse 85, and temperature 98 F, Weight 140 lbs., Height 63 inches and BMI 24.8. Her exam was nonsignificant for hyperactive bowel sounds. Abdomen was non distended, nontender without hepatosplenomegaly. Her labs included normal CBC, CMP, Lipase, TSH, ESR, CRP, Celiac, hepatitis, HIV and ANA. Her stool studies were negative for leukocytes, bacterial culture, C diff, blood, Ova and parasites. Negative tests for Giardia, Cryptosporidium and Entamoeba. Patient had normal colonoscopy, was diagnosed with irritable bowel syndrome (IBS) and was given diet restriction for IBS.

She returned 2 months later with the same complaint. She avoided all foods that could trigger the IBS with no improvement. A breath test for H pylori was performed and returned positive for H pylori. She was prescribed with Clarithromycin, Amoxicillin and Omeprazole for 2 weeks.

Her diarrhea completely resolved within 4 weeks. She returned for another follow up after 3 months with no further diarrhea. Repeat breath test was negative for H. pylori. Her husband also had positive H pylori breath test. Although he was asymptomatic, he also was treated with triple therapy.

Discussion

H Pylori is a spiral shaped, microaerophilic, gram-negative bacteria. The organism is characterized as catalase, oxidase, and urease positive. Urease is vital for its survival and colonization. Bacterial urease activity is clinically important because it forms the basis for several tests to diagnose infection.¹

H Pylori can cause GERD, acute and chronic gastritis, dyspepsia, peptic ulcer disease,^{2,3} gastric adenocarcinoma, and primary B cell lymphoma of the stomach.⁴ H Pylori has been cultured from diarrheal stools of children in Gambia, West Africa. Some estimate 50% of the world's population is affected. Infection is more frequent and acquired at an earlier age in developing countries compared with industrialized nations.⁵

Person to person transmission seems likely by either fecal/oral or oral/oral. Although oral/oral transmission of bacteria has not been confirmed. Humans appear to be the major reservoir of infection. Poor socioeconomic status is associated with higher rates of infection. H. pylori has also been isolated from cats.⁷ Contaminated water especially in developing countries may serve as an environmental source of bacteria. The organism remains viable in water for several days.⁸

We can diagnose H pylori by invasive techniques like endoscopy and biopsy or noninvasive techniques like urea breath testing (UBT), stool antigen testing, and serology. Of these, UBT and stool test are tests of active infection. H pylori serology can be positive in patients with both active or prior infection.^{9,10} Patients should stop PPI therapy at least two weeks before testing.⁹

All patients with evidence of active infection with H pylori should get treatment. The most common is Triple treatment, including clarithromycin, Amoxicillin and a PPI (proton pump inhibitor), all given twice daily for 14 days. Metronidazole (500 mg twice daily) can be substituted for amoxicillin in penicillin-allergic individuals. PPI-clarithromycin-metronidazole and PPI-clarithromycin-amoxicillin regimens are equivalent.^{10,11}

There is another treatment called Bismuth quadruple therapy that consists of bismuth subsalicylate, metronidazole, tetracycline and a PPI given for 14 days.¹² Confirmation of eradication should be performed in all patients treated for H pylori because of increasing antibiotic resistance; it should be done 4 weeks after completion of antibiotic treatment.¹³

Conclusion

In our patient with almost 8 months symptoms of diarrhea and normal stool tests and colonoscopy and no improvement after diet restriction for IBS. Breath test for H pylori returned positive. Triple therapy for H Pylori eventually resolved her symptoms with negative follow up breath test. Interestingly, her

asymptomatic husband's breath test for *H pylori* also returned positive. It is possible that he was infected during one of his overseas trips and transmitted to his wife.

REFERENCES

1. **Goodwin CS, Worsley BW.** Microbiology of *Helicobacter pylori*. *Gastroenterol Clin North Am.* 1993 Mar;22(1):5-19. Review. PubMed PMID: 8449570.
2. **Tack J, Talley NJ, Camilleri M, Holtmann G, Hu P, Malagelada JR, Stanghellini V.** Functional gastroduodenal disorders. *Gastroenterology.* 2006 Apr;130(5):1466-79. Review. Erratum in: *Gastroenterology.* 2006 Jul;131(1):336. PubMed PMID: 16678560.
3. **Kawai T, Moriyasu F, Tsuchida A.** Key Issues Associated with *Helicobacter pylori* Eradication. *Digestion.* 2016; 93(1):19-23. doi: 10.1159/000441667. Epub 2016 Jan 14. Review. PubMed PMID: 26788997.
4. **Zucca E, Bertoni F, Roggero E, Bosshard G, Cazzaniga G, Pedrinis E, Biondi A, Cavalli F.** Molecular analysis of the progression from *Helicobacter pylori*-associated chronic gastritis to mucosa-associated lymphoid-tissue lymphoma of the stomach. *N Engl J Med.* 1998 Mar 19;338(12):804-10. PubMed PMID: 9504941.
5. **Thomas JE, Gibson GR, Darboe MK, Dale A, Weaver LT.** Isolation of *Helicobacter pylori* from human faeces. *Lancet.* 1992 Nov 14;340(8829):1194-5. PubMed PMID: 1359263.
6. **Perry S, de la Luz Sanchez M, Yang S, Haggerty TD, Hurst P, Perez-Perez G, Parsonnet J.** Gastroenteritis and transmission of *Helicobacter pylori* infection in households. *Emerg Infect Dis.* 2006 Nov;12(11):1701-8. PubMed PMID: 17283620; PubMed Central PMCID: PMC3372328.
7. **Handt LK, Fox JG, Dewhirst FE, Fraser GJ, Paster BJ, Yan LL, Rozmiarek H, Rufo R, Stalis IH.** *Helicobacter pylori* isolated from the domestic cat: public health implications. *Infect Immun.* 1994 Jun;62(6):2367-74. Erratum in: *Infect Immun* 1995 Mar;63(3):1146. PubMed PMID: 8188360; PubMed Central PMCID: PMC186520.
8. **Hulten K, Han SW, Enroth H, Klein PD, Opekun AR, Gilman RH, Evans DG, Engstrand L, Graham DY, El-Zaatari FA.** *Helicobacter pylori* in the drinking water in Peru. *Gastroenterology.* 1996 Apr;110(4):1031-5. PubMed PMID: 8612990.
9. **Gatta L, Vakili N, Ricci C, Osborn JF, Tampieri A, Perna F, Miglioli M, Vaira D.** Effect of proton pump inhibitors and antacid therapy on ¹³C urea breath tests and stool test for *Helicobacter pylori* infection. *Am J Gastroenterol.* 2004 May;99(5):823-9. PubMed PMID: 15128344.
10. **Malfertheiner P, Megraud F, O'Morain CA, Atherton J, Axon AT, Bazzoli F, Gensini GF, Gisbert JP, Graham DY, Rokkas T, El-Omar EM, Kuipers EJ; European Helicobacter Study Group.** Management of *Helicobacter pylori* infection—the Maastricht IV/ Florence Consensus Report. *Gut.* 2012 May;61(5):646-64. doi:10.1136/gutjnl-2012-302084. PubMed PMID: 22491499.
11. **Gisbert JP, González L, Calvet X, García N, López T, Roqué M, Gabriel R, Pajares JM.** Proton pump inhibitor, clarithromycin and either amoxicillin or nitroimidazole: a meta-analysis of eradication of *Helicobacter pylori*. *Aliment Pharmacol Ther.* 2000 Oct;14(10):1319-28. Pub Med PMID: 11012477.
12. **Chey WD, Wong BC; Practice Parameters Committee of the American College of Gastroenterology.** American College of Gastroenterology guideline on the management of *Helicobacter pylori* infection. *Am J Gastroenterol.* 2007 Aug;102(8):1808-25. Epub 2007 Jun 29. PubMed PMID: 17608775.
13. **Chey WD, Leontiadis GI, Howden CW, Moss SF.** ACG Clinical Guideline: Treatment of *Helicobacter pylori* Infection. *Am J Gastroenterol.* 2017 Feb;112(2):212-239. doi: 10.1038/ajg.2016.563. Epub 2017 Jan 10. PubMed PMID: 28071659.

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