CLINICAL VIGNETTE

Case of H Pylori in a Patient with Chronic Diarrhea

Roya Mojarrad, MD and Amy Chow, MD

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 occured 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 Ibs., 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 diff, 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 month 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 (protein 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.

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