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Helicobacter pylori and Celiac Disease

Two stomach conditions that should not go undiagnosed

H pylori infection and celiac disease can have some of the same symptoms. These include abdominal pain, bloating, gas, and weight loss. A lot of other things can cause these symptoms too. But if the cause is not found, the person may get serious problems. For example, *H pylori* infection can cause a bleeding ulcer or stomach cancer. Celiac disease can result in anemia and osteoporosis. It can also result in cancer of the stomach, intestine, or lymph glands.

When patients are not diagnosed, they don't get the treatment they need. Or they may be given a treatment that doesn't address the problem. This is costly and doesn't help the patient feel better. So when these symptoms persist, it's worth a closer look.

H pylori

Facts about *H pylori* infection

- More than 50% of people in the world have an *H pylori* infection.[1]
- About 30% to 40% of Americans are infected.[2]
- 80% of infected people have no symptoms.[1]
- 10% of infected people may get an ulcer from it.[1]
- *H pylori* is the most common cause of stomach ulcers.[1]
- *H pylori* can lead to stomach cancer.

Who should be tested for *H pylori*?

Most infected people never get symptoms. They don't need to be tested.

People who have symptoms should usually be tested.[2] Symptoms may include a gnawing or burning stomach pain that gets better after eating, drinking, or taking an antacid. Other symptoms may include nausea, a bloated stomach, burping, and loss of appetite. More serious symptoms include dark or black stool, weight loss, severe stomach pains, and presence of blood in vomit.

Who's at risk for *H pylori* infection?

People who live in crowded, unclean conditions are more likely to be infected. Those who live with an infected person are at greater risk of getting it too. This is because *H pylori* is spread by contact with contaminated food, water, saliva, vomit, and stool. People who are infected most often get it during childhood.

Other people should be tested too:

- Those who have had an ulcer and no antibiotic treatment[2]
- Those with a gastric mucosa-associated lymphoid tissue (MALT) lymphoma[2]
- Those who have had surgery for early stomach cancer[2]
- Children who have a mother, father, sister, or brother with stomach cancer[3]
- Children who have iron-deficiency anemia that doesn't go away after therapy[3]

Which tests are used?

These tests are used to diagnose an *H pylori* infection:

- Urea breath test (UBT)
- Stool antigen test
- Antibody test
- Endoscopy
- Culture
- Rapid urease test

The first 2 tests are for people with stomach symptoms and low risk of stomach cancer.[2,4] Both can detect active infection. Both can be used before and after therapy.

Antibody tests, on the other hand, cannot tell apart active infection and past infection. They can't be used after treatment to see if the patient is cured. Also, they have a poor positive predictive value in populations with a low *H pylori* prevalence. Sensitivity is lower in children. Thus, experts don't recommend antibody tests for use in children.[2] They might be helpful for patients with stomach changes that decrease the amount of *H pylori* bacteria.[2,4] This includes bleeding ulcers.

Experts recommend 3 tests for adults with stomach symptoms and an increased risk of stomach cancer. These tests are endoscopy, culture, and antibiotic susceptibility testing.[4] The rapid urease test is another biopsy-based method that can be used.[2]

For children, the recommended tests for diagnosis include histopathology and either rapid urease test or culture.[3] A UBT or stool antigen test can be used to document cure.[3]

Additional information

You can learn more about *H pylori* infection at these websites:

National Digestive Diseases Information Clearinghouse (NDDIC)
http://digestive.niddk.nih.gov/ddiseases/pubs/hpylori/

American College of Gastroenterology
http://patients.gi.org/topics/peptic-ulcer-disease/

American Gastroenterological Association
http://www.gastro.org/patient-center/digestive-conditions/peptic-ulcer-disease

Helicobacter pylori and Celiac Disease

Facts

Celiac disease (CD)

Facts about CD

- One in 141 people in the U.S. have celiac disease.[5]
- About 83% of them don't even know it.[5]
- 5% to 20% of people with CD have a first-degree relative with the disease.[6]
- Symptoms can first appear at any age.
- It takes an average of 6 to 10 years for people with CD to be correctly diagnosed.[7]
- CD is hard to diagnose.
  - People who have CD don't all have the same symptoms.
  - There are many symptoms.
  - The symptoms can be caused by other things too.
- A gluten-free diet is the only treatment for CD.
- CD is a life-long disease. There is no cure.

Who should be tested for CD?

People who have symptoms should be tested.[6,8] These include people with chronic diarrhea, abdominal bloating, gas, or unexplained weight loss.

Doctors also test[6,8]:

- Children who fail to thrive or are shorter than expected for their age
- People with unexplained iron-deficiency anemia
- People with unexplained increases in liver enzymes (ALT , AST)
- People who have a first-degree relative with CD

Some experts think children with type 1 diabetes should be tested every year or 2. But they don't need to be tested if they are HLA-DQ2 and HLA-DQ8 negative.[6]

Which tests are used to diagnose CD?

Antibody tests are often used first. They can help find out if an intestinal biopsy is needed. There are 3 antibody tests:

- Tissue transglutaminase (TTG) antibody
- Deaminated gliadin peptide (DGP) antibody
- Endomysial antibody (EMA)

The TTG antibody is the preferred test.[6,8] Use the TTG IgA instead of the TTG IgG unless the person is IgA deficient. The TTG test can be confirmed by an EMA test. The EMA test uses a different method. It confirms that the EMA antibody targets TTG in tissue.

Who's at risk of CD?

First-degree relatives of those with CD are at greatest risk. People with HLA-DQ2 or HLA-DQ8 have a genetic risk for CD. People with these conditions may also have CD:

- Type 1 diabetes
- Autoimmune thyroid disease
- Down syndrome
- Low levels of IgA
- Iron-deficiency anemia with no known cause
- Osteoporosis that presents at an early age

Additional information

You can learn more about celiac disease at these websites:

National Digestive Diseases Information Clearinghouse (NDDIC)
http://digestive.niddk.nih.gov/ddiseases/pubs/celiac/index.aspx

American College of Gastroenterology
http://patients.gi.org/topics/celiac-disease/

American Gastroenterological Association
http://www.gastro.org/patient-center/digestive-conditions/celiac-disease

A DGP antibody test can be used to confirm the TTG antibody too. The DGP antibody may be helpful in young children (<4 years old) when TTG antibody may not have developed. A DGP antibody can also be used when the TTG antibody is negative and suspicion of CD is high. Note that the native gliadin antibody (AGA) test has been replaced by the DGP antibody test.

For children, an EMA antibody test can also be used.[8] If the child is <2 years old, test with TTG IgA and DPG IgA and IgG.[6] Some recommend using these 3 tests for those <4 years old.

Antibody testing is best done when the patient has gluten in his/her diet. Antibody titers decrease when gluten is not in the diet. Sometimes they even become negative. Other times, they are still positive, because it is very hard to completely exclude gluten from the diet.

None of the 3 serology tests (TTG, DGP, and EMA) is 100% accurate. Testing with more than one of them can increase sensitivity.[6] If a result is positive, an intestinal biopsy should be done.[6] It can help find out how much damage has been done to the intestine. A biopsy should also be done if the antibody tests are negative and suspicion of CD is very high.[6]

Doctors use HLA-DQ2 and HLA-DQ8 genetic testing to rule out CD. A negative result means the person doesn't have CD and probably won't get it. Use these tests when[6]:

- The small-bowel biopsy results are uncertain.
- The patient stopped eating gluten before CD testing was done.
- Serology and histology results don't match.
- A patient diagnosed with CD is not responding to treatment.
- The patient has Down syndrome.
- A child has type 1 diabetes.

References

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