Helicobacter pylori

Helicobacter pylori, also known as H. pylori, is a bacterium that is commonly found in the stomach. It is present in approximately one-half of the world's population.

The vast majority of people infected with H. pylori infection have no symptoms . However, H. pylori is capable of causing a number of gastrointestinal disorders, including ulcers, and, much less commonly, stomach cancer. It is not clear why some people get these conditions and others do not.

RISK FACTORS

H. pylori is probably spread by consuming food or water contaminated with fecal matter. It causes changes to the stomach and duodenum (the first part of the small intestine). The bacteria invades the protective tissue that lines the stomach. This leads to the release of certain enzymes and toxins. These enzymes and toxins may directly or indirectly injure the cells of the stomach or duodenum.

As a result of these changes, the stomach and duodenum are more vulnerable to damage from digestive juices, such as stomach acid. This results in chronic inflammation in the walls of the stomach or duodenum .

SYMPTOMS

Most individuals with chronic gastritis or duodenitis have no symptoms. However, some people develop more serious problems, including stomach or duodenal ulcers. Ulcers can cause a variety of symptoms or no symptoms at all. Common complaints include pain or discomfort (usually in the upper abdomen), bloating, feeling full after eating a small amount of food, lack of appetite, nausea, vomiting, and dark or tar-colored stools. Ulcers that bleed can cause a low blood count and fatigue.

Less commonly, chronic gastritis causes abnormal changes in the stomach lining, which can lead to certain forms of cancer. It is uncommon to develop cancer as a result of H. pylori infection. Nevertheless, because so many people in the world are infected with H. pylori, it is considered to be an important cause of stomach cancer. People who live in countries in which infection occurs at an early age are at greatest risk of stomach cancer.

DIAGNOSIS

The most commonly used tests include one or more of the following:

Blood tests

Breath tests

Stool tests

Endoscopy

Testing may include endoscopy of the upper gastrointestinal tract to confirm certain gastrointestinal conditions, such as peptic ulcer, as well as infection with H. pylori. However, endoscopy is not required for the diagnosis of H. pylori. It is generally reserved for patients who require endoscopy for other reasons .

During an endoscopy, biopsy samples can be taken from the stomach, which are then tested for H. pylori.

WHO SHOULD BE TESTED?

Patients with symptoms

Diagnostic testing for H. pylori infection is recommended for people with active gastric or duodenal ulcers and those with a past history of ulcers.

Although H. pylori infection is the most common cause of ulcers, not all patients with ulcers have H. pylori. Certain medications (eg, aspirin, ibuprofen , naproxen) can also cause peptic ulcers.

Patients without symptoms

H. pylori testing is usually not recommended for people who have no symptoms . However, it may be considered for selected people, such as those with a family history or concern about stomach cancer, particularly individuals of Chinese, Korean, or Japanese descent; these groups have a higher incidence of stomach cancer.

TREATMENT

Patients with a history of peptic ulcer disease, active gastric ulcer, or active duodenal ulcer associated with H. pylori infection should receive treatment for the infection.

Medications

No single drug effectively cures H. pylori infection. Treatment involves taking several medications for 7 to 14 days.

- Most of the treatment regimens include a medication called a proton pump inhibitor. This medication decreases the stomach's production of acid, which allows the tissues damaged by the infection to heal. Examples of proton pump inhibitors include lansoprazole , omeprazole , pantoprazole, rabeprazole and esomeprazole .

- Two antibiotics are generally recommended; this reduces the risk of treatment failure and antibiotic resistance.

Side effects

Up to 50 % of patients have side effects of H. pylori treatment. Side effects are usually mild, and fewer than 10 % of patients stop treatment because of side effects. For those who do experience side effects, it may be possible to make adjustments in the dose or timing of medication.

Some of the most common side effects :

- metronidazole or clarithromycin can cause a metallic taste in the mouth.
- Alcoholic beverages should be avoided while taking metronidazole; the combination can cause skin flushing, headache, nausea, vomiting, sweating and a rapid heart rate.
- Bismuth, which is contained in some of the regimens, causes the stool to become black and may cause constipation.
- Many of the regimens cause diarrhea and stomach cramps.

Treatment failure

Up to 20 % of patients with H. pylori infection are not cured after completing their first course of treatment. A second treatment regimen is usually recommended in this case. Retreatment usually requires that the patient take 14 days of a proton pump inhibitor and two antibiotics. At least one of the antibiotics is different from those used in the first treatment course.

Follow up

After completing treatment, repeat testing is usually performed to ensure that the infection has resolved. This is typically done with a breath or stool test . Blood tests are not recommended for follow up testing.