

Pathogenesis of *Helicobacter pylori*: Case Management Indicator Strategy

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Description

Helicobacter pylori (*H. pylori*) is a microorganism that invades the gastric and duodenal mucosa linings and is notoriously known to cause Gastric and Duodenal Ulcers, commonly diagnosed as Peptic Ulcer Disease (PUD) by Clinicians.

The pathogenicity of *H. pylori* spans between three major factors. These include:

1. Entry to, adherence to, and Colonization of the human gastric and (or) duodenal mucosa.
2. Avoidance, subversion and exploitation of the body's immune system, and
3. Multiplication, tissue damage and ultimate transmission to a new susceptible host individual.

A Combination of these factors enables this bacterium to thrive and cause infection in humans.

H. pylori produces Urease that aids in the colonization of the host by neutralizing gastric acid and providing ammonia for its protein synthesis and continued survival. The *H. Pylori* bacterium consequently weakens the protective mucous (mucosa) coating of the stomach and duodenum, thus allowing acid to get through to the sensitive lining beneath. The irritation symptoms are caused by both physical presence of the bacterium and the acid flux.

The *H. pylori* bacterium cause disease by attacking the gastric mucous lining leaving part of the stomach exposed to the acid which altogether irritate the stomach cancer ulcers and gastritis and sometimes stomach cancer.

The most common symptoms of *H. pylori* infection include:

1. Burning pain in the abdomen especially in the epigastric region
2. Abdominal pain that worsens that worsens on empty stomach and during at night
3. Nausea
4. Loss of appetite
5. Bloating and others

Diagnostic Criteria

A Patient presenting with the signs and symptoms above should be investigated to confirm for *H. pylori* infection. A blood sample

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is taken to look for antibodies in the blood or serum of the patient suspected to be suffering *H. pylori* infection. Conversely, a stool sample can also be taken to diagnose *H. pylori* bacterium infection.

Management

Treatment of *H. pylori* includes use of combination of one or more antibiotics with an acid suppressing agent. This is commonly referred as triple therapy. These include Pylo kit triple therapy, a single pill combination or individual drug combined forms.

To validate H, a patient presenting with the above signs and symptoms should be examined. Infection with *pylori*. A blood sample is taken to search for antibodies in the patient's blood or serum suspected of suffering from H. Infection with *pylori*. Conversely, to diagnose H, a stool sample may also be taken. An infection with the *pylori* bacterium.

H. Urease is produced by *pylori*, which helps to colonize the host by neutralizing gastric acid and supplying ammonia for its protein synthesis and continued survival. Consequently, the *H. Pylori* bacterium weakens the stomach and duodenum defensive mucous (mucosa) layer, allowing acid to get through to the delicate lining underneath. The signs of agitation are caused by both the bacterium's physical presence and the flux of acid.

Helicobacter pylori (*H. pylori*) are a microorganism that invades the linings of the gastric and duodenal mucosa and is known to cause gastric and duodenal ulcers, which are usually diagnosed by clinicians as Peptic Ulcer Disease (PUD).