Dyspepsia and *Helicobacter pylori* Infection

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Infection of *Helicobacter pylori* (*H. pylori*) is still a problem for some of the world community. This microbe has infected half of the world population. Although various epidemiology studies currently showed that this *H. pylori* infection was gradually declining, many studies revealed that the incidence decreased in young aged group patients.[1]

Someone who suffered from *H. pylori* infection will experience various gastroduodenal disturbances, considering that infection by this bacteria will cause chronic gastritis which further leads to peptic ulcer, or even malignancy. Specifically, there is no symptom which can predict whether someone is suffering from *H. pylori* infection or not.[2,3] Patient with chronic gastritis or peptic ulcer may come to the hospital with dyspepsia symptoms.

Dyspepsia is the main symptoms which may bring someone to undergo examinations to detect the presence of *H. pylori* infection. Dyspepsia itself as defined is the presence of discomfort or smarting in epigastrium pain which is accompanied with or without additional symptoms. Dyspepsia is experienced by 25-40% world population. The number of dyspepsia patients which visit the primary health care centre reach up to 3-5%, while in the USA it is predicted that there were 4 million of patients' visits annually.[4]

Most common type of dyspepsia being found is functional dyspepsia. While, the incidence of *H. pylori* infection will be lower in functional dyspepsia compared to organic dyspepsia, such as peptic ulcer.

An epidemiologic study performed in Italy to evaluate the incidence of dyspepsia in the community found that 15.1% from 1,033 participated subjects experienced dyspepsia. Further evaluation from this study revealed that from all dyspepsia cases, mostly or almost 73.1% were functional dyspepsia. Meanwhile, the remaining as much as 26.9% was organic dyspepsia, in the form of oesophagitis, Barret's esophagus, peptic ulcer, gastroduodenal erosion, even 2% patients with gastric cancer.[5] When it is associated to the incidence of *H. pylori* infection, there was actually no difference of incidence rate between group of patients who experience dyspepsia and that who do not.

Generally, in functional dyspepsia group, dominant symptoms are stomach fullness after meal and bloating and other symptoms, such as: epigastric pain, early satiety, nausea, and belching. While in the organic group, it depends on the location of the lesion. Organic dyspepsia which is associated with *H. pylori* is peptic ulcer. *H. pylori* infection is associated with 90-95% duodenal ulcer cases and 60-80% in patients with gastric ulcer.[6]

Patient with peptic ulcer usually come with the complaint of stomachache in the epigastric area which is felt for few minutes and few hours. If ulcer is located in the duodenum, patient will feel pain few hours after meal. In gastric ulcer, pain is predominantly felt during empty stomach. More *H. pylori* infection causes duodenal ulcer compared to gastric ulcer. Therefore, it can be concluded that in patient with *H. pylori* infection, patient predominantly complained of pain in the epigastric area.

Several studies tried to find the association between typical clinical manifestations with the presence of *H. pylori* infection, but in reality research results had never been consistent. Our study which was conducted several years ago concluded that most patients who suffered from functional dyspepsia (76.4%) experienced symptoms amelioration after eradication was performed.[7]

Until now, it has always been questioned if chronic infection causes dyspepsia symptoms when there is no peptic ulcer of gastric cancer being found. The disapperance of dyspepsia symptoms after eradication becomes a hint that dyspepsia occured due to *H. pylori*, but in group, in which complaints persisted although it has been eradicated, it will still be questioned if infection of *H. pylori* does not always cause complaints.

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