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A Note on Peptic Ulcers

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Research Article

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ABSTRACT

Peptic ulcer is the disease that develops in the form of sores in the lining of the stomach, oesophagus or small intestine. The most common symptom of this disease is abdominal pain that occurs from stomach region to the chest part. If the ulcer is left untreated then it may result in other adverse health conditions. The peptic ulcers usually occur as a result of imbalance of acid secretion and mucosal defences that resist the acid digestion. Accounting to the developments in the medical treatment of peptic ulcer disease (PUD) in the last two decades, surgical intervention is currently confined to the treatment of complicated disease, namely, ulcer hemorrhage, perforation, penetration and obstruction. Generally the major cause of the disease is *H.pylori* infection. The eradication of the infection completely helps to decrease the incidence of the disease.

INTRODUCTION

Helicobacter pylori ordinarily colonizes the gastric mucosa of more than half of the humans around the world, bringing on a disease that may show up in early adolescence and can hold on forever [1-5]. Surgical intervention is currently limited to the treatment of ulcer hemorrhage, perforation, penetration and obstruction [6-18]. Generally the major cause of the disease is *H.pylori* infection. *H. pylori* are proposed as the primary reason of peptic ulcer and incessant gastritis. It is likewise connected with gastric disease [19,20]. It's seriousness and side effects rely upon ecological variables, host powerlessness and bacterial parts, which permit *H. pylori* to switch amongst commensalism and pathogenicity [21-25]. *H. pylori* are hereditarily very variable, and the variability which influences *H. pylori* virulence may be helpful in distinguishing the strains with various degrees of pathogenicity. The geographic distribution of distinct [26-30]. *H. pylori* genotypes are generally obscure and ought to be set up. The predominance of more pathogenic genotypes in specific ranges may have essential epidemiological outcomes. It additionally may be connected with the seriousness of *H. pylori* related ailments in such areas [31-33]. *Helicobacter pylori* colonization induces lively natural and particular insusceptible reactions; be that as it may, the contamination does not vanish and a ceaseless gastritis condition persists if left untreated [34-40]. It has been demonstrated that the geological factors and insusceptible reaction of gastritis are the primary purposes behind the bacteria persistence and the clinical outcome. Gastritis occurring due to *H. pylori* is due to connection among an assortment of T cell subsets.

The discovery of *Helicobacter pylori* as the reason in peptic ulcer disease (PUD) has revolutionized its management. Despite the availability of effective drug treatments and a better understanding of its disease condition and symptoms, the percentage of patients who require emergent surgery for complicated disease remains constant at 7% of hospitalized patients [41-50]. Peptic ulcers are the sores formed in the lining of stomach or duodenum. The ulcer formation usually occurs due to the reaction between the bacteria in the stomach and non-steroidal anti-inflammatory medications in 50 % of affected population [51-55]. For the other half of the population it occurs due to drugs, severe stress, genetic factors, smoking, drinking etc. Peptic ulcer is a common disease that affects millions of people worldwide. Considering its global prevalence finding new approach for treating is important [55-60].

Symptoms

The main symptoms of the disease are:

- Burning pain in the upper abdominal wall lining [61,62]
- Acid reflux or heart burn
- Feeling of satiatment while eating

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- Weight loss
- Bloating or burping
- Nausea and vomiting [63-66]

Complications

Generally when the ulcerative condition is left untreated then it may result in further complications like:

Internal bleeding

Bleeding can occur as slow blood loss that leads to anemia or as severe blood loss that may require hospitalization or a blood transfusion. Severe blood loss may cause black or bloody vomit or black or bloody stools [67,68].

Infection

Peptic ulcers can eat a hole through (perforate) the wall of your stomach or small intestine, putting you at risk of serious infection of your abdominal cavity (peritonitis) [69].

Obstruction

Peptic ulcers can lead to swelling, inflammation or scarring that may block passage of food through the digestive tract. A blockage may make you become full easily, vomit and lose weight [70].

DIAGNOSIS OF PEPTIC ULCER

The diagnosis of the peptic ulcer depends on the symptoms and severity of the ulcer condition. The diagnosis of the disease includes the following methods:

Laboratory Test

This test is done to rule out the presence of bacterial *H.pylori* infection and this is done by taking stool sample test, blood test which helps the doctor to detect the presence of infection [71-75].

Breath Test

This test gives most accurate results compared to blood tests. In this test the patient is asked to consume food containing radioactive carbon. *H.pylori* breaks down the substance in the stomach [76-79]. Later the patient is asked to blow into a bag which is sealed and if the patient is infected with the bacterial infection then the breath sample will contain radioactive carbon in the form of carbon dioxide.

Endoscopy

In this test the doctor examines the upper digestive system by passing a hollow tube fitted with lens (endoscope) down the throat into oesophagus, stomach and small intestine to check out for ulcers. If ulcers are detected then a sample of tissue is taken for examination [80-84]. If the endoscopy shows an ulcer in your stomach, a follow-up endoscopy should be performed after treatment to show that it has healed, even if your symptoms improve [85,86].

Barium Test

This test is also referred to as upper gastrointestinal series. In this test the patient is asked to swallow a while liquid containing barium which helps in coating the intestinal wall and makes the ulcers more visible.

TREATMENT

The treatment for the disease is dependent on the cause of the ulcer. Generally majority of the ulcerative conditions are treated with in the initial stages but sometimes surgery may be required [87-90]. The treatment is usually classified into two type i.e.

Non-surgical Treatment

This sort of treatment is preferred in case of the ulcers caused by the *H.pylori*. Generally antibiotics are used to treat this condition. The drug regimen usually includes:

- H2 blockers which are used to decrease the acid production in the stomach
- Proton pump inhibitors that block the cells that produce gastric acid
- Antacids which act by neutralising stomach acid [91-93]
- Cytoprotective agents which are used to protect the lining of the stomach and small intestine.

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Surgical Treatment

In some rare cases such as recurrence of ulcers, internal bleeding, ulcers which tear the stomach lining only surgery may be suggested. The surgery may include complete removal of ulcer, grafting a tissue from other body part and sewing it over the affected area, tying off a bleeding artery, cutting off the nerve supply to stomach to reduce the production of stomach acid [94-96].

PREVENTION OF PEPTIC ULCERS

There is a plenty of writing concerning gastritis and peptic ulcer sickness brought on by the bacterium *Helicobacter pylori*. By the by, there is still much to be found out about this bacterium and its impacts on the human body. It may not be known precisely how *H. pylori* are transmitted yet at any rate we can recognize and destroy the bacterium without lifting a finger and productivity. Numerous better approaches to counteract and repress the action of H. pylori are being found. Presently it is up to the researchers to find far and away superior approaches to treat the illness brought on by this bacterium and to discover approaches to keep the sickness. Whenever *H. pylori*'s method of transmission is at last found, it might prompt more proficient approaches to avert transmission and disease [97].

Most peptic ulcers are promptly treatable by a short course of restorative medications. The possibility of preventing the foundation of *H.pylori* by immunization stays to develop an implemented. The role of NSAIDs in peptic ulceration is clearly defined but is still not widely recognised [98].

Like structural designing for waterways, the medicinal administration of ulcer ought not to be founded on a straightforward cause-impact relationship. Treatment should be acclimated to individual patients and should be outlined by taking the association of numerous causative variables (counting *H. pylori* furthermore, push) into thought. At the end of the day, the bio-psycho-social methodology is vital for the treatment of peptic ulcer [99,100].

To avert peptic ulcers, stay away from the accompanying:

- Liquor
- Normal wellsprings of Helicobacter pylori microscopic organisms (e.g., debased sustenance and water, floodwater, crude sewage)
- Long haul utilization of non-steroidal calming drugs (NSAIDs)
- Smoking

Great cleanliness can decrease the danger for peptic ulcer malady created by Helicobacter pylori disease. Washing the hands completely with warm sudsy water subsequent to utilizing the restroom and before eating and abstaining from sharing eating utensils and drinking glasses likewise can diminish the spread of microbes that can bring about PUD.

Conclusion

Although there are significant advances in sciences, this disease remains an important medical problem, because the large use of non-steroidal anti-inflammatory drugs (NSAIDs), excessive smoking, increase alcohol consumption, and life style increase the risk of the disease. Therefore, this explains the reason for choosing this topic in order to promote healthy behavior and improve health outcomes throughout lifespan by giving attention to the preventive measures.

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