Need for public awareness: Peptic ulcer disease

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Abstract
Peptic ulcer disease (PUD) which existed around the world has shown a decline both in developed and developing countries in the current decade due to improvement in sanitary conditions and availability of specific treatment along with proton pump inhibitors. PUD has been linked to H. pylori infection and rampant use of NSAIDs. Gastric Carcinoma is a fatal outcome of PUD which takes long time to develop providing a valuable window for prevention. Gastric Carcinoma is the fifth most common malignancy and third leading cause of cancer fatality. 80% of gastric carcinoma has been incriminated to H. pylori infection. Chronic H. pylori induced gastritis is preventable through observance of domestic, food and personal hygiene thereby averting faecal-oral and oral-oral transmission of the organism among family and community members. Informative awareness program supported with screening, surveillance, treatment and community outreach schedule has been recommended to reduce the morbidity and mortality burden of PUD.

Keywords: PUD, Gastric CA, H. pylori, PPI.

Peptic ulcer disease (PUD) has demonstrated a variable trend in the past. In the West, the incidence of duodenal ulcer intensified sharply at the turn of the 19th to 20th century but exhibited a perceptible decline later during the last three decades.[1,2] In the East, the surge was equally notable to begin with, the decline appeared to have been delayed; started waning in the past decade only.[3, 4] The drift has been imputed to an enhancement in sanitary condition, better water supply and personal hygiene associated with widespread use of proton pump inhibitors (PPI) resulting in a declining trend of PUD.[5, 6] A global overview of 2018 recounted the highest annual incidence of all PUD as 141.8 per 100,000 population in Spain and the lowest 23.9 in UK. Highest annual incidence of bleeding PUD was 72.5 per 100,000 persons in Greece as compared to lowest of 8.3 in UK. Highest yearly incidence of perforated PUD has been 4.4 per 100,000 individuals in South Korea in contrast to lowest of 2.2 in UK.[7] This indicates that the disease entity remains common around the world; however, existing regional data gap calls for further studies to grasp the insight.

Etiology of PUD includes H. pylori infection, NSAIDS, pepsin, smoking, alcohol, bile-acids, steroids, stress, changes in gastric mucin consistency and Crohn disease.[8, 9] However, the pathogenic role of H. pylori in chronic active gastritis and its association with duodenal ulcer in 95 to 99% of patients has been well established.[10] Prevalence of H pylori is higher in developing countries that estimated to have infected about 70% of the population, as compared to 40% in the developed countries.[11] In developing countries, where most children become infected by the age 10, gastric cancer rates are very high.[12] Despite use of eradication therapy for H. pylori infection along with PPIs and advanced endoscopic intervention during recent decades, mortality associated with PUD has not decreased concurrently with the fall in incidence.[13] Worldwide, gastric cancer is the fifth most common cancer and third leading cause of cancer-related death.[14] It has been estimated that 80% of all gastric cancer cases can be attributed to chronic H. pylori infection.[15] The development of gastric cancer from H. pylori, which involves a multistep process from chronic to atrophic gastritis to mucosal metaplasia to dysplasia to gastric carcinoma, can take decades to develop.[16] This slow progression provides an opportunity for early detection and treatment of H. pylori that may result in prevention of gastric cancer.

Risk factors of H. pylori infection in children are allied to ethnicities, geographic location, living conditions, personal hygiene, drinking water sources, type of housing, sewage system and garbage collection within the living environment. These risk factors are usually associated with socioeconomic status (SES) of the family.[17] Specifically, lower SES, consumption of restaurant food, meat, fish, non-filtered water, smoking and family history of PUD are risk factors for H. pylori infection.[18] Since mother-child and sib-sib transmission are most significant, the best way to avert H. pylori infection is to educate women about personal hygienic measures that can protect themselves and their offspring. Considering high morbidity and mortality load, significant infectivity, large population at risk, long disease progression period and simple preventive measures, it is felt pertinent that dissemination of awareness about PUD would benefit population at risk and prevent occurrence of gastric carcinoma at large. Awareness program needs to be buttressed by screening, surveillance, treatment and outreach schedule for the community.

Conflict of Interest: None.

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