Helicobacter pylori infection and the risk of gastric cancer in the Philippines



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Despite the global decreasing trend in *Helicobacter pylori* infection and gastric cancer incidence and mortality, specific populations are still at risk of this disease due to sociodemographic inequalities. Sun and colleagues reported that elderly and male individuals, including those with low educational attainment and socioeconomic status in China, had an increased risk of having gastric cancer.¹ We share the current situation and challenges in preventing and managing gastric cancer in the Philippines.

Gastric cancer incidence in the Philippines has steadily declined from 1980 to 2002.² Improved food preservation methods can partially explain the decline (i.e., salting or smoking to refrigeration). Gastric cancer incidence and death rates were higher in Filipino males (58.3% and 58.4%) than in females (41.7% and 41.6%).^{2,3} There was a lack of data regarding the association of age, socioeconomic status, and educational attainment with H. pylori infection and the development of gastric cancer. Hence, we emphasize the need for more epidemiological and clinical studies on socioeconomic and clinical risk factors for H. pylori infection and gastric cancer in the Philippines. This information can be used in developing evidence-based practice, programs, and policies for prevention, screening, treatment, and palliative care for gastric cancer.

H. pylori is the most critical risk factor for gastric cancer.⁴ In 2018, its prevalence was 34% among the general Filipino population and 26.5%-79.9% among Filipino patients with dyspepsia.⁴ In the Philippines, 30% of *H. pylori* infections have strains resistant to metronidazole, while 2% are resistant to clarithromycin.⁴ Mutations in the *rdxA* and *frxA* genes confer resistance to metronidazole, while mutations in 23S *rRNA* confer resistance to clarithromycin.⁵ Continued misuse of these antibiotics may increase antibiotic-resistant *H*.

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pylori in the Philippines and, in turn, may increase the incidence of gastric adenocarcinoma.

To sustain the decline in gastric cancer cases in the Philippines, we need to improve the awareness and knowledge of Filipinos regarding the role of *H. pylori* infection in gastric cancer development. We also call on the government to continue expanding national initiatives and programs such as the Philippine Cancer Control Program, the national health insurance program (PhilHealth), and the 2019 Universal Health Care Act to make cancer prevention and treatment more accessible and affordable to Filipinos.

Declaration of interests

We declare no competing interests.

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References

- Sun D, Lei L, Xia C, et al. Sociodemographic disparities in gastric cancer and the gastric precancerous cascade: A population-based study. *Lancet Reg Heal – West Pacific*. 2022;23. https://doi.org/ 10.1016/j.lanwpc.2022.100437.
 Laudico A V, Mirasol-Lumague MR, Mapua CA, et al. Cancer inci-
- Laudico A V, Mirasol-Lumague MR, Mapua CA, et al. Cancer incidence and survival in Metro Manila and Rizal province, Philippines. Jpn J Clin Oncol. 2010;40:603–612.
 Laudico A V, Mirasol-Lumague MR, Medina V, Mapua CA, Valen-
- J Laudico A V, Mirasol-Lumague MR, Medina V, Mapua CA, Valenzuela FG, Pukkala E. 2015 Philippine Cancer Facts and Estimates. 2015.
- 4 Vilaichone RK, Quach DT, Yamaoka Y, Sugano K, Mahachai V. Prevalence and Pattern of Antibiotic Resistant Strains of Helicobacter Pylori Infection in ASEAN. Asian Pac J Cancer Prev. 2018;19:1411–1413.
- Hashemi SJ, Sheikh AF, Goodarzi H, et al. Genetic basis for metronidazole and clarithromycin resistance in Helicobacter pylori strains isolated from patients with gastroduodenal disorders. *Infect Drug Resist.* 2019;12:535–543.

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