EDITORIAL

H. PYLORI: DOES CO-MORBIDITY AFFECT THE PREVALENCE?

Helicobacter pylori is a spiral bacterium which resides in the lumen of the stomach. It was rediscovered by Warren and Marshall in 1983. Since then there have been major changes in the understanding and treatment of peptic ulcer disease.

The bacterium is most often found in the antrum of the stomach, residing on the surface and at the foveolar regions of the gastric mucosa, close to intercellular junctions. The presence of these bacteria provokes an intense polymorpho neutrophil infiltration.

With persisting infection, acute gastritis becomes chronic with an increase in lymphocytes and plasma cells in the lamina propria. Chronic gastritis may involve the antrum or may spread to the whole of the stomach, a pattern more commonly seen in developing countries.

Alone, or in combination with genetic or other environmental factors, some individuals may progress to atrophic gastritis with loss of glandular component of the gastric mucosa. It is worth noting that, on a world scale, a far greater number of cases of gastric atrophy are as a result of this infective process than those caused by autoimmune gastritis (previously, labeled type A, associated with pernicious anaemia).

There is a marked difference in the prevalence of *H. pylori* between developed and developing countries. In the developed world with high socio-economic status, the prevalence of *H. pylori* is low ranging between 15% and 54% in the general population(1).

In the developing world with low socioeconomic status, the prevalence of *H. pylori* is high ranging from around 70% in Asia and south America upto 85% in Africa. Infection in these countries occurs at an early age(1,2).

H. pylori is associated with a number of diseases causing dyspepsia in both developed and developing countries. In developing countries *H. pylori* is found in 95% of doudenal ulcers, 67-85% of gastric ulcers and there is an attributable risk to gastric cancer in 50% of cases(3). In Kenya, all cases of peptic ulcer had evidence of *H. pylori*, while dyspeptic patients with normal mucosa on endoscopy had *H. pylori* in 80.5% of cases. The evidence of *H. pylori* in gastric cancer cases was very low, 25% of cases(3). It is now well established that infection with *H. pylori* is the most important case of peptic ulcer disease(4,5) and that successful eradication of this organism markedly reduces the rate of ulcer relapse.

The prevalence of *H. pylori* in other conditions have also been described. The prevalence of *H. pylori* was found to be low in inflammatory bowel disease compared to controls. The prevalence was even lower in Crohn's disease than in ulcerative colitis(6). It has been found that the prevalence of *H. pylori* in HIV/AIDS patients is lower than in HIVnegative patients. Marano *et al.* (7) in America found that the prevalence of *H. pylori* in AIDS patients with histologic chronic active gastritis was much lower than the prevalence previously reported for HIV-negative patients with similar pathology. Vaira *et al* (8) from Italy also found that *H. pylori* prevalence in HIV-1 positive residents was lower than in HIV-1-negative residents. However, Battan *et al*(9) did not find a difference in the prevalence of *H. pylori* between AIDS/ARC patients and age matched controls. This led them to postulate that cell-mediated deficiency does not appear to increase the risk of infection with *H. pylori.* Fabris *et al* (10) from Italy looked at the immune status further. They found that the prevalence of *H. pylori* was low in cases of CD4 cell counts less than 100 x 10^6/L and high in cases of CD4 cell counts of 200 x 10^6/L. Thus, cell-mediated immune deficiency does not appear to increase the risk of infection with *H. pylori.*

Most of the work on this subject has been reported from the developed world. Ali Mohamed *et al* (11)in this issue of the journal reports their findings of *H. pylori* in HIV-1 positive patients from Kenya. They found that cell-mediated immune deficiency does not appear to increase the risk of infection with *H. pylori.*

F. A. Okoth, MBChB, MMed, Physician and Gastroenterologist, Director, Centre for Virus Research, Kenya Medical Research Institute (KEMRI), P.O Box 54840, Nairobi, Kenya

REFERENCES

1. Megraud F. Epidemiology of *Helicobacter pylori* infection. In: Pathbone B.J., Heatley R.V., eds. *Helicobacter pylori* and Gastroduodenal Disease. Oxford: Blackwell Scientific, 1992: 107-123.
2. F. Megraud, M., Brassens-Rabbe, F. Denis, A. Belbouri and D.Q. Hoa. Seroepidemiology of Campylobacter pylori infection in various populations. *J. Clin. Microb.* 1939: 1870- 1873.
3. E. Ogutu, S.K. Kangethe, L. Nyabola and A. Nyongo. Endoscopic findings and prevalence of *Helicobacter pylori* in Kenyan patients with dyspepsia. *East. Afr. Med. J.* 1998; **75:**85-89.
4. K.E.L. McColl. Helicobacter pylori 1989 - 1998. *Eur. J. Gastroenterol Hepatol.* 1999; **11:**13 - 16.
5. G.N.J. Tytgat, A. Lec, D.Y. Graham, M.F. Dixon and T. Rokkas. The role of infectious agents in peptic ulcer disease. *Gastroenterol Int.* 1993: **6:** 76 - 89.
6. P.O. Varc, B. Heikitis, J.A. S, Ivennoinen, R. Karttunen, S.E. Niemela and J.K. Lelitola Sero-prevalence of helicobacter pylori infection in inflammatory Bowel disease: is Helicobacter pylori infection a protective factor? *Scand. J. Gastroenterology* (Norway). 2001; **36:**1295 - 1300.
7. B.J. Marano Jr. F. Smith and C.A. Bonauno. Helicobacter pylori prevalence in acquired immunodeficiency syndrome. *Am. J. Gastroenterol.* 1993, **88:**687 - 690.
8 D. Vaira, M. Miglioli, M. Menegatti, J. Hoton, A. Bschini, M. Vergura. C. Ricci, P. Azzarone, P. Mule, L. Barbara, *et al.* Helicobacter pylori status, endoscopic findings, and serology in HIV-1 positive patients. *Dig. Dis. Sci.* 1995, **40:**1627-6.
9. R. Battan, M.C. Raviglione, A. Palagiano, J.F. Boyle, M.T. Sabatini. K. Sayad and L.J. Ottiviano. Helicobacter pylori infection in patients with Acquired Immune Deficiency Syndrome. *Am. J. Gastroenterol.* 1990; **85:** 1576 - 1579.
10. P. Fabris, L. Bozzola, P. Benedetti, M. Scagnelli, R. Nicolin, V. Manfrin. Scarparo C. and F. De Lalla. *H. pylori* infection in HIV-positive patients. A serohistological studies. *Dig. Dis. Sci.* 1997; **42:**289 - 292.
11. F. Alimohamed, G. Lule, A. Nyongo *et al.* Helicobacte pylori prevalence and endoscopic finding in H.I.V seropositive patients with upper gastrointestinal tract symptoms at Kenyatta National Hospital. *East Afri. Med. J.* 2002;**79:**2-7