

## Letter to Editor

### Food bioactive componts, a possible adjuvant for H.pylori eradication

#### Dear Editor,

*Helicobacter pylori* (*H. pylori*) is a Gram-negative bacillus. Since its discovery in the early eighties by warren and marshall, for the first time in the history of medicine *H. pylori* was isolated from human gastric biopsy specimens (1). Many studies have presented that *H. pylori* can be isolated from the oral cavity and salivary secretions. Colonization of the gastric pits in the stomach by this brachium is a serious risk factor for peptic ulcers and stomach cancer (2).

Several antibiotic regimens have been assessed for *H. pylori* therapy. Despite that, few regimens have shown high eradication rates. Therapeutic regimens of *H. pylori* infection are usually based on at least two types of antibiotics (imidazoles, macrolides and amoxicillin) combined with a double dose of the proton-pump inhibitor (omeprazole or pantoprazole). The problem of eradication therapy is the potentially undesirable increasing resistance of *H. pylori* to the commonly used antibiotics. Moreover, eradication therapy is associated with some side effects. Long-term therapy with the antibiotic can result in pervasive alterations in gut flora and lead to susceptibility infections. So, the development of the adjuvant therapy for the eradication of *H. pylori* which also prevent adverse side effects would be a valuable item.

Accordingly, different potential adjuvant therapies for *H. pylori* have been considered. The major research on alternative therapies contains foods like plant origin, probiotics, and polysaccharides. Some compounds from medicinal plants with anti-*H.pylori* activity consist of polyphenolic, sulforaphane, flavonoids, carvacrol, tannins, quercetin and  $\beta$ -hydrastine (3, 4). Green tea contains polyphenols, which hamper the growth of bacteria. Some studies have shown that drinking green tea can decrease *H. pylori* colonization during standard treatments (5). Broccoli sprouts (high in sulphorafane), cruciferous vegetables include kale, cabbage, cauliflower, brussels sprouts, red-headed cabbage, and radishes (high in isothiocyanates) can diminish the *H. pylori* growth (6). Apples contain flavonoids that defend the lining materials of the stomach against *H.pylori* infection (7). Honey exhibits potent in vitro

bacteriostatic activity against *H. pylori* and inhibits urease activity. Antibacterial activity of honey is attributable to its hydrogen peroxide content (5). Probiotic bacteria can modulate *H. pylori* activity by either immunological (reduction of IL-1 and IL-6) or non-immunological mechanisms (competition with potential microorganisms) (3). Therefore, the use of antibiotics as first-line therapies may be appropriate for the eradication of *H.pylori*, but the results confirm the medicinal properties of some foods and compounds as a new adjuvant therapy for *H.pylori* eradication. Moreover, further studies should be required to support their use.

**Keywords:** Helicobacter pylori, adjuvant therapy, dietary bioactive components.

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