

Ranitidine, A Potential Option for *Helicobacter pylori* Eradication

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Dear Editor,

I have read with great interest the study reported by Şahin and Yılmaz (1), which described the case of a 15-year-old male patient diagnosed with *Helicobacter pylori* (*H. pylori*) infection and allergy to both all proton pump inhibitors (PPIs) and famotidine. The bacterial infection was eradicated using a quadruple treatment comprising ranitidine, bismuth, metronidazole and tetracycline. This case provides us with an important message for clinical practice. Because a profound acid suppression is required to eradicate *H. pylori* infection, the Maastricht V/Florence Consensus Report recommends using a combination of a PPI and two or three antibiotics to eradicate *H. pylori* infection (2). Several studies demonstrated a remarkable reduction in the activity of the main antibiotics used against *H. pylori* after reducing the pH from 8 to 5. This is because concentration of these drugs in the mucosa, a key factor for *H. pylori* eradication, decreases concomitantly with pH reduction (3). As PPIs are membrane-permeable weak bases that accumulate in acid spaces of the active parietal cell, they share the same pharmacodynamics. Conventional PPIs are prodrugs that are activated by acids and covalently bind to their target, the H⁺/K⁺-ATPase (or proton pump) (4).

Histamine represents the most important stimulus of the gastric parietal cells. Because this stimulatory action is mediated by the H₂ subtype receptors, selective H₂ receptor antagonists (such as ranitidine) are inhibitors of acid secretion. Despite the preference for PPIs, the use of ranitidine at high dosage (300 mg twice daily) permitted similar eradication rates (3). Furthermore, several studies reported that ranitidine can be safely co-administered with other drugs (4). To confirm the efficacy of ranitidine, in a previous study we showed that a ranitidine-based eradication treatment was not inferior to a similar PPI-based regimen (p=0.9) (5).

In conclusion, in a setting where PPIs are not available or cannot be prescribed, ranitidine is an appropriate drug in a combined regimen for *H. pylori* eradication. It is probable that the availability of vonoprazan, a potassium-competitive acid blocker, as a new type of effective acid suppressant will offer new options in this field (4).

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Author's Reply

Re: How Should *Helicobacter Pylori* Eradication Be Performed in Cases of Extensive Allergies to Proton Pump Inhibitors?

Dear Editor,

We appreciate the interest shown by Pellicano in our article (1) and for the valuable comments.

We agree with Pellicano's all comments. The vonoprazan is not available in Turkey, because of that we could not experience this new drug.

In conclusion, we wanted to emphasize that cross-reactivity between proton pump inhibitors (PPIs) should be considered before HP treatment in patients with allergies to PPIs in our case report. The choice of treatment should be planned based on the results of allergic evaluations. In addition to that if there is an extensive

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allergies to PPIs or PPIs are not available, we also wanted to emphasize that ranitidine can be safely used in a combined regimen of HP eradication therapy as suggested by Pellicano (1-4).

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