Reviewer's report

Title: Early effect of oral administration of omeprazole with mosapride as compared with those of omeprazole alone on the intragastric pH

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Reviewer: Yoshihisa URITA

Reviewer's report:

Dear Dr. Hiroshi Iida,

Your manuscript entitled “Early effect of oral administration of omeprazole with mosapride as compared with those of omeprazole alone on the intragastric pH.” has been reviewed. The authors conclude that an oral dose of omeprazole 20 mg plus mosapride 5 mg increased the intragastric pH more rapidly than omeprazole 20 mg alone. This manuscript is of enough interest and describes original work that merits its publication in the journal of BMC Gastroenterol. Although the work was of good quality, the manuscript required some revisions as below;

1. I cannot understand the mechanism by which administration of mosapride enhances inhibitory effects of gastric acid secretion. Although the authors described that mosapride accelerates the absorption of omeprazole, is this a true theory? Furthermore, if enhanced gastric emptying is associated with enhanced absorption from the small intestine, should administration of omeprazole plus mosapride provide higher pH during earlier time? Contrary to this hypothesis, the gastric pH was not higher during 0-1, 1-2, or 2-3-hour period, but significantly higher during 3-5-hour study period in the present study. These results did not accord with your description. The author should describe the mechanism of inhibitory effect of gastric acid during ingestion of PPI plus mosapride.

2. In Figure 2, intragastric pH during 3-4-hour study period was fallen from 4.0 to 3.3. Why this transient decrease of intragastric pH observed in this study? Did this reflect reduced blood concentration of omeprazole? If this speculation was correct, why was the intragastric pH during 4-5-hour syudy period increased again?

3. The big problem of the study was the absence of discussion on relationship between enhanced absorption of omeprazole and unchanged pH in the early time. Ordinary, enhanced absorption results in enhanced excretion, suggesting that the effect of acid secretion should not be last for a long time. Why did additional ingestion of mosapride avoid fall in intragastric pH during 3-4-hour study period?

4. The authors should describe the kind of EIA kit used for H.pylori infection.

Level of interest: An article whose findings are important to those with closely related research interests
Quality of written English: Acceptable

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:

declare that I have no competing interests