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LETTER TO THE EDITOR

Response to: “Prevalence of *Helicobacter pylori* in Lanyu island”



To the Editor,

We thank Mrs. Wiwanitkit for her interest in our recently published paper in the *Journal of the Formosan Medical Association*.¹ Our study was a cross-sectional study conducted among the inhabitants of Lanyu Island, using the ¹³C urea breath test (¹³C UBT) to determine the prevalence of *Helicobacter pylori*.² We identified a high prevalence of *H. pylori* infection on Lanyu Island and multiple logistic models found that Yami ethnicity, alcohol consumption, and marital status were associated with *H. pylori* infection. We would like to respond to some concerns raised by Mrs. Wiwanitkit regarding our study.

The ¹³C UBT is frequently utilized as a noninvasive way to screen *H. pylori* infection in the general population; especially in the pediatric population that is afraid of blood sampling for serological studies. The ¹³C-UBT was proven to have a good sensitivity of 93.8% and specificity of 99.1% for the diagnosis of infection.³ The ¹³C UBT was also reported to have a superior sensitivity than serology and stool antigen tests.⁴ The ¹³C UBT could produce false-negative results in patients taking antisecretory drugs. It is recommended that more than one diagnostic method may be used to decrease the false-negative rate in such circumstances. However, we think that false-negative results were a rare occurrence in our study. Lanyu Island represents an environment lacking many medical resources. Therefore, inhabitants of Lanyu Island would have far less exposure to strong antisecretory drugs, for example, proton-pump inhibitors. Every participant was examined for their *H. pylori* status by ¹³C UBT before they received antisecretory medication in our mobile medical service. Using ¹³C UBT to determine *H. pylori* infection, we indeed found a 72.1% prevalence rate of *H. pylori* infection in Lanyu Island inhabitants, which means that

the ¹³C UBT is still a sensitive tool to detect *H. pylori* infection.

Another concern of Mrs. Wiwanitkit is that, as a popular tourist attraction, Lanyu Island might not be a completely closed community due to good transportation. We know that the socioeconomic and living conditions might be major factors to determine the prevalence of *H. pylori* infection in one environment. The differences in exposure to antibiotics or medical resources, health awareness, and the method to preserve food, such as refrigeration, might exist in a relatively closed environment such as Lanyu Island. We do not think that good transportation for tourists visiting Lanyu Island will change the socioeconomic and living conditions in the short term. Another example is that the proportion of non-Yami people on Lanyu Island is around 12%, with the majority of them migrating to the island in search of work. Our study observed that non-Yami people displayed a different prevalence of *H. pylori* infection than did Yami people (47.9% vs. 76.5%, respectively). Even in the non-Yami people who had lived on the island for a while, the prevalence of *H. pylori* infection was not affected.

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Conflicts of interest: The authors have no conflicts of interest relevant to this article.

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