

Author's response to "Importance of sample size calculation in a retrospective study of recurrent and non-recurrent acute pancreatitis"

Sir,

We appreciate the comments raised by Lopez-Valentin *et al.*,^[1] highlighting the importance of sample size estimation in differentiating between the clinical characteristics of recurrent and non-recurrent acute pancreatitis.^[2] We are grateful for this opportunity to respond to these comments.

First, in our study, 262 patients were included in the recurrent acute pancreatitis (RAP) group and 1305 in the non-RAP group with a ratio of more than 0.2, which was appropriate for data analysis between the two groups, with the conclusions thus being reliable.

In the study, RAP group had a significantly lower percentage of cholelithiasis pancreatitis (4.19% vs 17.08%, $P < 0.001$) and acute liver injury (5.34% vs 11.42%, $P < 0.001$). It could be partly explained by the fact that the probability of recurrence after an episode of cholelithiasis-related acute pancreatitis (AP) was related to whether and how long after an attack an appropriate procedure such as endoscopic retrograde cholangiopancreatography (ERCP) or cholecystectomy was done, and the risk of recurrence and acute liver injury was eliminated if surgery was done, as stated in our manuscript.^[3]

Second, in our study, three factors associated with RAP including male, diabetes and hypertriglyceridemia (HTG) were identified by multivariate logistic regression analysis. Males with diabetes and HTG were more likely to develop RAP. As highlighted by Lopez-Valentin *et al.*, there remains a possibility that some factors may interacted with each other, given that the proportions of males and diabetes were both significantly higher in the RAP group. In our retrospective analysis, we did not aim to make some prognostic biomarkers or predictive models for RAP occurrence. We only focused on the differences between RAP and the non-RAP in order to provide some potential clinical suggestions. In addition, differences in AP etiologies may result from different lifestyles and socioeconomic

status in different regions.^[4,5] In recent years, the incidence of AP due to HTG has been increasing yearly in China, which might partly explain that HTG was a risk factor for RAP.^[6]

In future, studies with subgroup analyses with more clinical and laboratory variables should be done in order to find effective treatments like drugs and interventions for RAP patients with different etiologies.

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Conflicts of interest

There are no conflicts of interest.

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