Comment on "Acute and Chronic Pancreatitis Disease Prevalence, Classification, and Comorbidities: A Cohort-Study of the UK Biobank"

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Clinical and Translational Gastroenterology 2022;13: e00496. https://doi.org/10.14309/ctg.0000000000000496

We read with great interest the recently published study by Spagnolo et al. concerning pancreatitis research from the cohort study of UK Biobank (UKBB) (1). This prospective cohort study was insightful and meaningful. However, we found some points that might need to be improved.

First, this study was based on a prospective database which had unique advantages in chronic disease study. According to this study, a Venn diagram was conducted and 5 categories were made: (i) acute pancreatitis (AP) for only one time, (ii) AP for more than one time, (iii) AP for only one time + chronic pancreatitis (CP), (iv) AP for more than one time + CP, and (v) CP. If some further studies could be conducted, it would be more reasonable to set research groups as AP (i), RAP (ii), and CP (iii + iv + v). With application of the Toxic-metabolic, Idiopathic, Genetic, Autoimmune, Recurrent and severe acute pancreatitis and Obstructive (TIGAR-O) checklist (an etiology-based classification system of CP) (2), this prospective study would be more meaningful in etiology and natural course study in CP, especially for risk factor study.

Second, both AP and CP could attack in any period of life. A previous epidemiological study on AP and CP had reported increases in the incidences, and the incidences in adults were higher than that in the pediatric population (3–5). However, UKBB was based on the population of people aged between 40 and 69 years. This middle-aged and elderly population could not represent the whole population of the United Kingdom. Therefore, the conclusion from this database could only represent the middle-aged and elderly population from the United Kingdom, and this cohort study could not show the holistic epidemiological characteristic of AP and CP among the UK population. This study reported an increase in the incidences of AP and CP from 2000 to 2020. However, because the participants in the UKBB did not change, these increasing trends could only be explained as that the incidences of AP and CP would increase when people get older, not that the incidences of AP and CP actually increased during 2001–2020.

Third, in the comorbidity analysis, International Classification of Diseases-10 (ICD) codes were set as screening criteria. However, the cohort was collected using a combination of both ICD-9 and ICD-10 codes. Therefore, it would be more accurate and comprehensive to set both ICD-9 and ICD-10 codes as screening criteria to tabulate and compare comorbidities in the population of AP and CP.

In addition, there were some calculation errors in results. As described in this article, "Of the AP cases, 447 (13.8%) had ICD-10 codes showing more than one AP attack. Of these, 163 (36.4%) also had an ICD-10 code for CP,

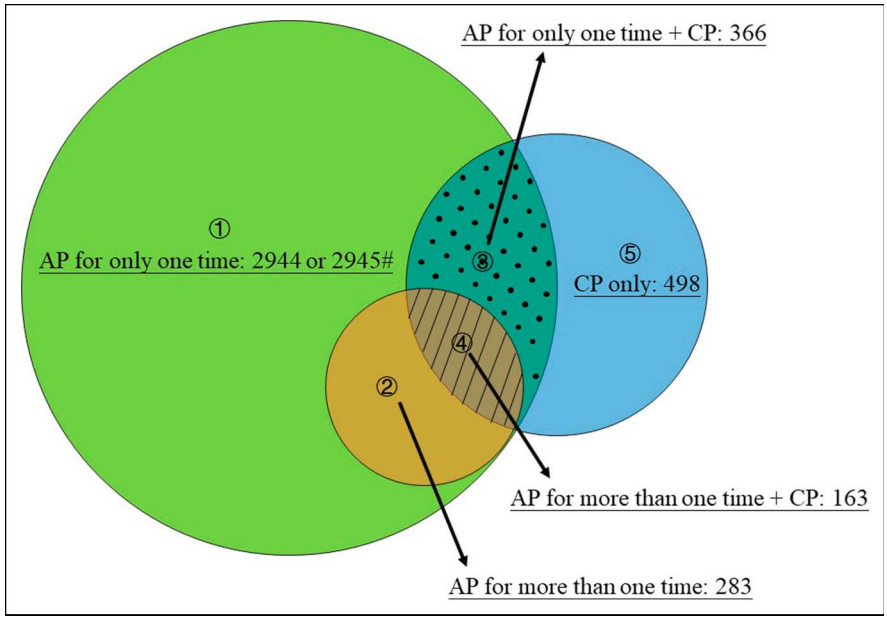

Figure 1. Venn diagram of patients with AP and CP in this study. There were 3 clusters in this study. From big to small, 3 circles in the figure represent "diagnosis with AP for at least on time," "diagnosis with confirmed CP," and "diagnosis with AP for more than one time," respectively. Specifically, patients could be separated into 5 groups: (i) the group of AP for only one time was colored with green; (ii) the group of AP for more than one time was colored with orange; (iii) the group of AP for only one time + CP was marked with dots; (iv) the group of AP for more than one time + CP was marked with stripes; and (v) the group of CP only was colored with blue. #There were some calculation errors in the results which need to be clarified. AP, acute pancreatitis; CP, chronic pancreatitis.

leaving 283 (63.6%) remaining in the AP only group." In this section, 163 plus 283 equals 446, not 447.

In conclusion, this research based on prospective database was meaningful, but there were still some aforementioned points that might need to be improved.

CONFLICTS OF INTEREST

Guarantor of the article: Liang-Hao Hu, MD.

Specific author contributions: C.H. and Y.-W.L. contributed equally to this work.

Financial support: None to report.

Potential competing interests: None to report.

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