Reviewer’s report

Title: Genetic mutations in acute pancreatitis

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Reviewer: RUPJYOTI TALUKDAR

Reviewer’s report:

In this study, the authors have evaluated the genetic mutations of 221 patients with acute pancreatitis (AP) and compared with 345 healthy controls. The authors have studied the common mutations in SPINK1, CFTR and CTRC genes with the aid of PCR based techniques. However, there are several major issues that needs to be addressed by the authors.

INTRODUCTION:
1. Introduction is too long. It should be shortened substantially and authors need to be more focused.

MATERIAL AND METHODS:
1. It has been mentioned that biliary AP was confirmed based on USG, CT, NMR and/or ERCP. Was ALT levels and EUS not used in making the diagnosis of biliary AP? ERCP is currently not recommended for making a diagnosis biliary AP; but is restricted only to therapeutic ductal clearance for impacted CBD stones with cholangitis in the setting of AP.
2. Who were the healthy controls and how were they selected and enrolled for the study? Were they age and sex matched?
3. Why was PRSS1 mutations not checked? This is one of the most important gene that has been found to be associated with pancreatitis in different cohort worldwide. Authors should also study mutations in the PRSS1 gene.

STATISTICAL ANALYSIS:
1. Results should also be reported in terms of odds ratio with 95% confidence intervals.

RESULTS:
1. Were all the 221 patients with AP were consecutively admitted?
How many patients had first episode and how many had recurrent AP? Many of these patients are likely to have underlying chronic pancreatitis. Did the authors evaluate for the presence of features of underlying chronic pancreatitis?
2. How was alcohol related AP defined, in terms of duration and amount of alcohol intake?
3. How many patients had pancreas divisum and what was the relationship of the genetic mutations with pancreas divisum and other aetiologies?
4. Authors should also report the frequency of acute pancreatitis in the presence
of each mutations that were studied. They should also mention if there was multiple mutations in patients and if any, what was the relationship with the development of acute pancreatitis and its severity.

5. Headings of Tables 2, 3 and 4 appears to be incorporated in the main text. This needs to be removed.

6. Figures 1-7 may be omitted since they doesn't seen to contribute to the manuscript substantially.

7. There are several language and grammatical errors all throughout the manuscript.

**Level of interest:** An article of limited interest

**Quality of written English:** Not suitable for publication unless extensively edited

**Statistical review:** Yes, and I have assessed the statistics in my report.

**Declaration of competing interests:**

I declare that I have no competing interests