

Reviewer's code: 03720781

SPECIFIC COMMENTS TO AUTHORS

We think that the overutilization of CT imaging within patients presenting with AUP is a familiar phenomenon either in American or our country (China), although there have no associated study in our country. 'The work done by the authors of this article is valuable to clinical practice and indicated increasing guideline adherence on initial management of AP for clinician is urgent task. We agree with that multi-interdisciplinary quality improvement initiatives should be implemented to enhance adherence to guidelines and reduce healthcare cost, and ultimately improve patient care in the future.

Reviewer's code: 00037018

SPECIFIC COMMENTS TO AUTHORS

This single-center retrospective study describes a large cohort of patients diagnosed with uncomplicated pancreatitis on the basis of clinical/laboratory criteria from a large hospital. Almost half of the patients underwent CT scan, that was uneventful in the large majority of patients. Costs associated with useless CT scan correspond to almost 1000000\$. This study inappropriate use of health care resources to examine by CT patients that have no benefit from this exam (i.e., diagnosed with uncomplicated pancreatitis). The article is well written and discussed. It is descriptive in nature, but still of great relevance and interest. There are some clarifications that according to this reviewer could further improve the manuscript:

1. about 50% of patients with a clinical diagnosis of uncomplicated pancreatitis underwent the CT scan: what as the criteria by which a patient with uncomplicated was elected to the CT scan? Was that stochastic or there was any clinical/demographic/laboratory difference among the two patients populations?

- Since this was a retrospective study, we classified patients as uncomplicated pancreatitis if they met the inclusion criteria of presenting with the classic pancreatitis symptoms, meeting the laboratory parameters (amylase or lipase > 3x upper limit), and BISAP and Ranson score less than or equal to 2 at admission. Patients that were uncomplicated should not have received a CT scan per the guidelines, however based on our results over 50% of these patients did receive CT imaging.

2. how many patients were excluded from the study for the criteria "Exclusion criteria included patients with BISAP and Ranson's score 3 or greater, those admitted to the intensive care unit, or those with documented history of recurrent or chronic pancreatitis." in total and for each criteria?

- A total of 900 patients were excluded; we don't have a break down for each criteria, as we were focused more on the inclusion criteria population.

3. the statistical paragraph looks a bit naive, this reviewer is not sure excel is a general term, may be proprietary (perhaps spreadsheet is a more general term)?

- We have modified this statement in the manuscript to include the proprietary information. Our statistician exported the data to SAS to analyze the descriptive statistics.

4. could the authors describe which drugs were associated to pancreatitis in the 14 cases of drug induced pancreatitis presented in their cohort?

- This would be a limitation of our study as we did not look into which specific drugs caused the pancreatitis. Our study was more focused on the utilization of CT scan imaging and therefore we looked into the etiology of the pancreatitis, but not the specific drugs.

5. in the discussion, the sentence "Given that recent literature has suggested that Ranson's criteria tends to favor false positives, using the Ranson's Criteria reduced the risk that patients in our population cohort were falsely identified as AUP" seems unclear, please revise as needed.

- We have edited and revised this sentence to clarify it.

6. in the abstract and methods, the acronym ICD and K## are unclear, please define.

- ICD stands for International Classification of Diseases, and we have updated that in the manuscript. The K numbers are the billing codes for the different etiology diagnoses.

7. please check that tables (in particular table 2) should be self-explanatory and all acronyms should be defined. Figure 1 is not necessary, as the same information is present in the text of the manuscript. Check for this also the tables, they should include non-redundant information.

- We have defined acronyms and clarified the tables. We defined the scores in table format in addition to the manuscript to have make it easier for readers to follow.

- We deleted Figure 1. We presented some of the information in tables to present some of the data visually to make it easier to follow.

Reviewer's code: 03244495

SPECIFIC COMMENTS TO AUTHORS

1. The diagnosis of AP is made by the presence of two of the three following criteria: (i) abdominal pain typical for AP (acute, constant, epigastric abdominal pain or right upper quadrant pain radiating to upper back) (ii) serum amylase and/or lipase level greater than three times the upper limit of normal, and/or (iii) characteristic findings on abdominal imaging. The author retrospectively analyzed 1305 AP patients with

abdominal pain accompanied by elevation of serum amylase or lipase; However, in clinical practice, patients have different onset and treatment time, individual differences, and disease degree, especially the onset and treatment time, which have certain effects on laboratory indicators; Some patients were treated at the early stage of the disease, and the laboratory indicators might be in the normal range, at which time the imaging showed AP. This is due to the limitations of the retrospective study conducted by the authors. In addition, the author did not mention the onset and time of treatment.

- These are very valid statements, however we looked at patients only within the emergency department that acutely presented with abdominal pain and an elevated lipase or amylase that was 3x the upper limit of normal. Our study was more focused on the diagnosis of uncomplicated pancreatitis and finding if CT scans were necessary in patients that already had presented with abdominal pain and elevated laboratory findings.

2. In addition, the diagnostic guidelines indicate that two of these are sufficient to make a diagnosis of AP; In the diagnosis of diseases, laboratory examination and imaging examination are both the diagnostic criteria of grade II, and they complement each other. Imaging examination can not only provide the basis for diagnosis, but also assess disease progress, treatment effect, etiology of AP, etc. In clinical practice, some of the patient's laboratory indicators returned to normal and the imaging examination was still abnormal. The author only compared the average length of hospital stay between the two group and did not propose the evaluation criteria for the patient's cure.

- Our study was solely looking at the diagnostic factor and was seeing if these patients had an adverse result from the pancreatitis with or without imaging, and majority of the patients had no complications (only 1 patient had necrotizing pancreatitis out of our study sample size). We wanted to look into whether patients receiving CT imaging or

not impacted hospital stay, which we did not find a difference. This is presumed patients were discharged in stable condition as no patients in the cohort died.

3. The last item in the BISAP Score of AP is "Pleural effusion present on imaging". How can patients without radiographic examination in this paper determine whether there is Pleural effusion?

- Patient did receive chest x-rays upon evaluation in the emergency department, which we utilized for determination of pleural effusions. If there was a concern of pleural effusion on the chest x-ray, it was included within the BISAP score. Our study was focusing mostly on CT imaging in regards to radiographic examination.

4. The author pointed out BISAP and Ranson's scores less than or equal to 2 for both were included to suggest AUP. But in the BISAP scores, One of them is that "≥2 SIRS Criteria" is denoted by 1 point. If the patient is accompanied by SIRS and the patient score does not exceed 2, AUP is also included ? But SIRS is one of the systemic complications of AP, does this contradict with AUP?

- The BISAP score has been validated and previous studies, as cited in our study, have shown that it accurately can classify AUP. Therefore, if they only presented with >2 SIRS, but did not meet the other criteria then they would only have 1 point and would be classified as AUP. We included these patients, and as our results show only 1 patient had a complication with necrosis formation.

5. The author pointed out that Chronic pancreatitis was not included, but in clinical practice, some patients had acute episodes of chronic pancreatitis, who may have had mild symptoms before and did not know they had a history of chronic pancreatitis, which was found to be an acute attack of chronic pancreatitis in the imaging

examination, Will such patients be included in cases not examined by imaging?

- In our study, we did not include “known” chronic pancreatitis patients. If patients had previous episodes of pancreatitis or had a history of chronic pancreatitis they were excluded. We wanted to focus on first time acute uncomplicated pancreatitis patients.

6. In the article, 405 patients with AUP did not progress during the treatment process?

- Our study focused on the importance of CT scan imaging. Of the 405 patients that met the inclusion criteria, 210 underwent CT scan imaging. Only 1 of those patients resulted in necrosis. 195 appropriately did not undergo imaging, and did not have any known complications during the treatment process.

7. It is suggested that the authors compare the value of using laboratory tests and imaging tests to diagnose AUP.

- This would be a great idea in the future to see if there is value or a difference between laboratory tests or imaging tests to diagnose AUP. However, that would take away from our primary aim and goal of this study as this study is looking solely at the overutilization of CT scan imaging in the diagnosis of AUP. But, we can possibly do an extension study that looks further into the laboratory results and compares that to the imaging results to see if there is a difference with the diagnosis.