Author's response to reviews

Title: Massive pneumoretroperitoneum arising from emphysematous cholecystitis: A case report and the literature review

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Author's response to reviews: see over
August 8, 2015

Magdalena Morawska,
Executive Editor,
BMC Gastroenterology

Dear Magdalena:

Thank you for your letter of July 27, 2015, about our manuscript, entitled “Massive pneumoretroperitoneum complicated with emphysematous cholecystitis: A case report and the literature review” that we submitted for publication in BMC Gastroenterology. We are grateful to you for the review of our manuscript. We resubmit a revised version, so that our manuscript conforms to reviewers’ comment.

I’m looking forward to hearing from you soon.

Sincerely yours,

Yasumichi Yagi, MD
Department of Surgery
Toyama City Hospital
<To Reviewer’s Suggestions>

The manuscript was revised along with reviewers’ comment. The authors’ responses to reviewers’ comment are as follows.

Response to Reviewer: Michael Pitiakoudis

Thank you for your comments. The response to your comments is remarked as below.

Major compulsory revisions

1. Please use no abbreviations in the abstract such as EC and CT, according to journal's instructions.

As the reviewer pointed, we modified the ‘Abstract’ section not to use abbreviations including CT and EC.

2. While going through your manuscript, I was not able to locate any data to support that you did not perform an abdominal ultrasound but you preferred an abdominal x-ray and CT instead. Ultrasound is the most common imaging modality currently employed to visualize the gallbladder, especially those patients with the clinical suspicion of acute cholecystitis. This modality helps detect acute emphysematous cholecystitis earlier than plain abdominal radiography and identifies the condition in 90-95% of cases. Also, ultrasound can estimate the exact stage of this disorder.

We preferred CT to make prompt diagnosis of acute peritonitis. We considered gastrointestinal perforation firstly, and cholecystitis was considered as secondary change owing to local peritonitis. In clinical practice, it is difficult to differentiate whether pneumoretroperitoneum is derived from EC or gastrointestinal perforation. Ultrasound is indeed available for detection of earlier stage cholecystitis. With regard to the diagnosis of emphysematous cholecystitis, the previous reports indicated that the air in the wall and lumen of the gallbladder interfered in visualization of ultrasound image with a reverberation artifact. In the ‘Discussion’ section, we added sentences describing the findings of ultrasound for emphysematous cholecystitis.

3. Did you manage to stabilize the patient with fluid replacement and immediate use of antibiotics before the surgery as you mentioned that the patient was diagnosed with sepsis?

We managed to stabilize the patient with fluid replacement and use of broad-spectrum antibiotics before the surgery. In addition, recombinant human thrombomodulin was administered to improve sepsis induced disseminated intravascular coagulation (DIC). In the ‘Case Presentation’ section, we added a sentence describing the additional management of the patient.
4. It is not clear why was the patient transferred to another hospital after his recovery? Was any other complication induced by the patient's management?

Because of decreased activity of daily living, the patient was transferred to rehabilitation hospital. In the ‘Case Presentation’ section, we added a supplemental sentence.

5. Please provide an histological figure if it is possible.

We added Figure 4 as a histrological finding.

Minor essential revisions
1. On page 1 - line 9, it would be preferable as "authors' emails" or "email addresses".

On page 1 - line 9, it was modified as "authors' emails".

2. Please indicate the corresponding author with *.

Corresponding author was indicated the with *

3. Please add the normal ranges of the laboratory tests that you present.

We add the normal ranges of the laboratory tests in the ‘Case presentation’ section.

4. On page 4 - line 15, please write 26,800/µL.

We made a modification as 26,800/µL the reference according to the journal’s style.

5. Please complete the references 6,11,17 according to the journal's style.

We confirmed the reference according to the journal’s style.

6. Please add if there are any competing interests.

‘The authors have no competing interests to declare in relation to this manuscript.’ described in the ‘competing interests’ section.
Discretionary revisions 1. The title should probably be more representative.

Title was changed to “Massive pneumoretroperitoneum arising from emphysematous cholecystitis: A case report and the literature review”

Response to Reviewer: Thiago Nunes
Thank you for your comments. The response to your comments is remarked as below.

Major Compulsory Revisions
1-) I noticed the absence of differential diagnoses of pneumoretroperitoneo and pneumoperitoneum. Please adjust.

We added a sentence describing differential diagnoses in the ‘Discussion.’

2-) Extending the discussion on the image for findings

We added sentences describing the radiographic staging in the ‘Discussion’ as “Gill et al. divided EC radiographically into three stages according to the distribution of air within the gallbladder and/or the biliary system as follows: Stage1 – air in the gallbladder lumen, Stage2 – air in the gallbladder, and Stage3 – air in the pericholecystic tissue.”

3-) There is no surgical treatment option for the case? Interventional Radiology? An elderly patient it and risks to the traditional surgical procedure.

In the present case, we could not exclude gastrointestinal perforation. If the diagnosis could be made as EC, percutaneous drainage guided by ultrasound or CT would be a treatment option for both gallbladder and pneumoretroperitoneum. However, in the present case, retroperitoneal abscess was spread widely with sponge-like septum. Thereafter, we should take account of probability that percutaneous drainage resulted in insufficient drainage, if the retroperitoneal abscess was not localized to a solitary cavity. Percutaneous drainage would be a treatment option as a second best alternative for elderly high-risk patients. In the ‘Discussion’ section, we added a sentence describing the alternative management for EC.

4-) Abdomen ultrasound could help in this case? Discuss this topic.
Ultrasound is indeed available for detection of earlier stage cholecystitis. With regard to the diagnosis of emphysematous cholecystitis, the previous reports indicated that the air in the wall and lumen of the gallbladder interfered in visualization of ultrasound image with a reverberation artifact. In the ‘Discussion’ section, we added sentences describing the findings of ultrasound for emphysematous cholecystitis.

<Points/Contents of the revision>

Title: “Massive pneumoretroperitoneum arising from emphysematous cholecystitis: A case report and the literature review”

On page 1 - line 9, it was modified as "authors' emails".

Corresponding author was indicated the with *

Abstract:
As the reviewer pointed, we modified the ‘Abstract’ section not to use abbreviations including CT and EC.

Background: No change.

Case presentation:
We add the normal ranges of the laboratory tests in the ‘Case presentation’ section.

P4L17: we made a modification as 26,800/μL the reference according to the journal’s style.

P6L9-12: we added a sentence describing the additional management of the patient as ‘Because laboratory data indicated the criteria of disseminated intravascular coagulation (The revised Japanese Association for Acute Medicine) [6], recombinant human thrombomodulin was administered to improve sepsis-induced disseminated intravascular coagulation for 5 days.’

P6L14-15: Added Fig. 4.

Discussion:

P7L4-6: added a sentence describing differential diagnosis ‘not only in emphysematous cholecystitis but also in emphysematous pancreatitis [10] and emphysematous pyelonephritis [11].’


P7L13-17: added a sentence describing the ultrasonographic diagnosis as ‘In the diagnosis of cholecystitis, ultrasound is indeed available and widely conducted for detection of earlier stage cholecystitis. With regard to EC, the previous reports indicated that the air in the wall and lumen of the gallbladder interfered in visualization of ultrasound image with a reverberation artifact [2]. Besides it is difficult to tell whether air was in the lumen or in the wall of the gallbladder.’

P8L13-P9L3: added a sentence describing the percutaneous drainage for EC as ‘In the present case, we could not exclude gastrointestinal perforation. If the diagnosis could be made as EC,
percutaneous drainage guided by ultrasound or CT would be a treatment option for both gallbladder and pneumoretroperitoneum. However, in the present case, retroperitoneal abscess was spread widely with sponge-like septum. Thereafter, we should take account of probability that percutaneous drainage resulted in insufficient drainage, if the retroperitoneal abscess was not localized to a solitary cavity. For elderly high-risk patients, percutaneous drainage would be a treatment option as a second best alternative [16].’

P10L3-7: added a sentence describing the stage of EC as ‘Gill et al. divided EC radiographically into three stages according to the distribution of air within the gallbladder and/or the biliary system as follows: Stage1 –air in the gallbladder lumen, Stage2 –air in the gallbladder, and Stage3 –air in the pericholecystic tissue [19]. Accordingly, the present case corresponded to the stage3.’

Conclusion: no change.

Reference: With addition of Ref 6, 16, 19, Ref number were changed respectively.

Legends: Added Fig. 4.

Figures: We added Figure4 to present the histological finding of cholecystitis.