Peer Review File
Article information: http://dx.doi.org/10.21037/atm-20-4426

Reviewer A

Comment 1: The evaluation of the efficacy of the treatment performed in both techniques is not detailed enough. How did the authors decided that "… wounds of PCL were successfully covered by medical protein glue"?.
There should be a section in the Methods describing the laparotomy and the evaluation of the PCL coverage by the glue.
in the future, it may be reasonable to evaluate accuracy using radio-opaque glue and simple post-treatment CT scan.

Reply 1: The comment raised by reviewer was quite right. The section describing the laparotomy and the evaluation of the PCL coverage by the glue was added in the Methods of "The outcome measures" . The limitation of using radio-opaque glue and simple post-treatment CT scan to evaluate accuracy was also added in the discussion.

Comment 2: Statistics. I believe t-test is problematic in two groups of 6 animals. I rather see a table describing the timing for each animal separately.

Reply 2: The comment raised by reviewer was quite right. The methods of statistics were improved. The table describing the timing for each animal separately was also added as the "Supplementary Table".

Comment 3: The introduction is lacking a paragraph explaining the clinical importance of using protein glue in PCL. At the very least, a reference is required for "Ultrasound-guided percutaneous intervention (UGPI) plays an important role in the clinical management of PCL, such as fluid drainage and local drug therapy."

Reply 3: The comment raised by reviewer was quite right. The sentence for explaining the clinical importance of using protein glue in PCL was added. And the reference for "Ultrasound-guided percutaneous intervention (UGPI) plays an important role in the clinical management of PCL, such as fluid drainage and local drug therapy." was also improved.

Comment 4: I suggest adding some more details about the timing of the procedures.

Specifically, the registration process should be quite long – how much time did it take

from the overall time of the procedure? From my experience locking the plane,

finding the vascular bifurcation and fixing the "OVERLAY" should take at least 1.5-2

minutes.

Reply 4: The comment raised by reviewer was quite right. The overall time of the procedure for locking the plane was added in the part of the result.

Comment 5: I guess that for some patients it would be difficult to find the bifurcation of the celiac from aorta. Is there any other good candidate for lock point?

Reply 5: The comment raised by reviewer was quite right. It was hard to say which lock plane is better due to the different situations of the patients. But there are other lock points could be as the candidates, such as intrahepatic portal vein, hepatic vein bifurcation, celiac trunk, and origin of the renal artery. In this study, the bifurcation of the celiac from aorta was used as the lock point. The other candidates for lock point were added in the part of "Image matching and fusion".

Comment 6: The contribution of injecting contrast material during the UGPI (Figure 2) is not clear. Was that part of the overall time of the procedure?

Reply 6: The comment raised by reviewer was quite right. The contribution of injecting contrast material was not a part of the overall time of the procedure. Therefore, the Figure2C was removed in our new manuscript.

Comment 7: The authors claim that CUFI assisted UGPI is superior to UGPI w/o other techniques assistances, but it is still not clear to me what are the benefits of CUFI assisted UGPI over CT-guided percutaneous intervention. The authors mention that: "Compared to CT guidance, UGPI could be performed at bedside, guarantee a real-time image and is applicable to patients with complicated and serious situation". However, CT-guided percutaneous intervention should be feasible in such patients and a comparison to it seems reasonable.

Reply 7: The comment raised by reviewer was quite right. There is no doubt that CT-guided percutaneous intervention could accurately determine the puncture point, pathways and depth, which is widely applicable for retroperitoneal diseases. Meanwhile, the transabdominal US was much faster and cheaper than CT as it could be performed at bedside and guaranteed a real-time image, but was lack of the precise advantages of CT. (D'Onofrio M, Beleu A, De Robertis R. Ultrasound-guided percutaneous procedures in pancreatic diseases: new techniques and applications. European radiology experimental. 2019;3(1):2.)

In this study, we aimed to combine the advantage of CT based on transabdominal US to improve the precise guidance of UGPI, which may expanded the capabilities of US during percutaneous intervention in several pancreatic diseases such as PCL. Therefore, we would like to observe the comparison of different guidance technologies (ultrasound-guided and CUFI assisted-guided) based on ultrasound images, but not on different images guidance (CT and ultrasound).

Comment 8: Is there a long-term clinical follow-up for these animals? e.g. blood tests, pancreatic complications such pseudo-cysts etc.

Reply 8: The comment raised by reviewer was quite right. There was no a long-term clinical follow-up for these animals in this study. The early local drug therapy for PCL has been preliminarily observed by our research team before (Feng C, Yang H, Huang S, Zhou X, Wang L, Cui X, et al. Early local drug therapy for pancreatic contusion and laceration. Pancreatology : official journal of the International Association of Pancreatology (IAP) [et al]. 2019;19(2):285-9.) This study aims to observe the precision and effectiveness of CT-Ultrasound fusion imaging (CUFI) assisted UGPI in the early management of local drug therapy on PCL.

Comment 9: It is not clear from the caption of figure 1 what is the meaning of "+" on the figure.

Reply 9: The comment raised by reviewer was quite right. The site of the wound was marked with “T+” not “T” using the “Target” function under volume navigation mode. The “T+” was modified in our new manuscript.

Comment 10: Table 2 seems redundant (perhaps Table 1 as well). The data is detailed in the text.

Reply 10: The comment raised by reviewer was quite right. Table 1 and Table 2 were removed in our new manuscript.

Reviewer B

Comment 1: As you mensioned in the Introduction section, the pancreas is located in the retroperitoneum and is difficult to visualize under transabdominal US guidance, Since the pancreas is located in the retroperitoneum and is difficult to visualize with an echo guide, the usefulness of the approach in EUS via the gastric wall has been reported. Please discuss this point.

Reply 1: The comment raised by reviewer was quite right and the point mentioned above was discussed in the part of “introduction” and “discussion” in our new manuscript.