

PEER-REVIEW REPORT

Name of journal: World Journal of Gastrointestinal Endoscopy

Manuscript NO: 65867

Title: EUS-Guided Biliary Drainage: Are We There Yet?

Reviewer's code: 05260804

Position: Peer Reviewer

Academic degree: MD

Professional title: Doctor

Reviewer's Country/Territory: Thailand

Author's Country/Territory: United States

Manuscript submission date: 2021-03-17

Reviewer chosen by: Man Liu

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Scientific quality	<input type="checkbox"/> Grade A: Excellent <input type="checkbox"/> Grade B: Very good <input type="checkbox"/> Grade C: Good <input checked="" type="checkbox"/> Grade D: Fair <input type="checkbox"/> Grade E: Do not publish
Language quality	<input checked="" type="checkbox"/> Grade A: Priority publishing <input type="checkbox"/> Grade B: Minor language polishing <input type="checkbox"/> Grade C: A great deal of language polishing <input type="checkbox"/> Grade D: Rejection
Conclusion	<input type="checkbox"/> Accept (High priority) <input type="checkbox"/> Accept (General priority) <input checked="" type="checkbox"/> Minor revision <input type="checkbox"/> Major revision <input type="checkbox"/> Rejection
Re-review	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Peer-reviewer statements	Peer-Review: <input checked="" type="checkbox"/> Anonymous <input type="checkbox"/> Onymous Conflicts-of-Interest: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

SPECIFIC COMMENTS TO AUTHORS

First of all congratulation for your comprehensive EUS BD review, I have some comment in this review.

1. Could you please mention about this paper for EUS HGS, eg. plastic stent for HGS, intra-scope channel stent release technique, liver impaction technique to prevent shearing of the guidewire. Gastrointest Endosc. 2015 Aug;82(2):390-396.e2. doi: 10.1016/j.gie.2015.02.041. Epub 2015 May 1. A newly designed plastic stent for EUS-guided hepaticogastrostomy: a prospective preliminary feasibility study “Plastic stents reduce the frequency of adverse events, such as segmental cholangitis or liver abscess caused by peripheral bile duct obstruction” VideoGIE. 2020 Aug; 5(8): 355–358. Published online 2020 May 15. doi: 10.1016/j.vgie.2020.04.003, Novel combination of a 0.018-inch guidewire, dedicated thin dilator, and 22-gauge needle for EUS-guided hepaticogastrostomy Uchida D, Kawamoto H, Kato H, Goto D, Tomoda T, Matsumoto K, et al. The intra conduit release method is useful for avoiding migration of metallic stents during EUS-guided hepaticogastrostomy (with video). J Med Ultrason (2001).2018;45:399–403. Miyano A, Ogura T, Yamamoto K, Okuda A, Nishioka N, Higuchi K. Clinical impact of the intra-scope channel stent release technique in preventing stent migration during EUS-guided hepaticogastrostomy. J Gastrointest Surg. 2018;22:1312–8 “Stent release inside the scope channel can prevent intraperitoneal stent deployment” Ogura T, Masuda D, Takeuchi T, Fukunishi S, Higuchi K. Liver impaction technique to prevent shearing of the guidewire during endoscopic ultrasound-guided hepaticogastrostomy. Endoscopy. 2015;47:E583–E584 “use the “liver impaction technique.” First, the guidewire is pushed adequately into the peripheral bile duct, and the FNA needle is pulled back into the hepatic parenchyma. Because the tip of the FNA needle is then within the hepatic parenchyma, shearing becomes less likely”

2. Are We There Yet? You need to mention about learning curve of EUS BD and training EUS Model. Thanks

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Name of journal: World Journal of Gastrointestinal Endoscopy

Manuscript NO: 65867

Title: EUS-Guided Biliary Drainage: Are We There Yet?

Reviewer's code: 05226039

Position: Peer Reviewer

Academic degree: MD

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Reviewer's Country/Territory: Spain

Author's Country/Territory: United States

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Reviewer chosen by: AI Technique

Reviewer accepted review: 2021-03-19 17:38

Reviewer performed review: 2021-03-27 18:57

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Scientific quality	[<input checked="" type="radio"/>] Grade A: Excellent [<input type="radio"/>] Grade B: Very good [<input type="radio"/>] Grade C: Good [<input type="radio"/>] Grade D: Fair [<input type="radio"/>] Grade E: Do not publish
Language quality	[<input checked="" type="radio"/>] Grade A: Priority publishing [<input type="radio"/>] Grade B: Minor language polishing [<input type="radio"/>] Grade C: A great deal of language polishing [<input type="radio"/>] Grade D: Rejection
Conclusion	[<input type="radio"/>] Accept (High priority) [<input checked="" type="radio"/>] Accept (General priority) [<input type="radio"/>] Minor revision [<input type="radio"/>] Major revision [<input type="radio"/>] Rejection
Re-review	[<input checked="" type="radio"/>] Yes [<input type="radio"/>] No
Peer-reviewer statements	Peer-Review: [<input checked="" type="radio"/>] Anonymous [<input type="radio"/>] Onymous Conflicts-of-Interest: [<input type="radio"/>] Yes [<input checked="" type="radio"/>] No



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SPECIFIC COMMENTS TO AUTHORS

Congratulations on this great review. It has been a pleasure to review the text.

PEER-REVIEW REPORT

Name of journal: World Journal of Gastrointestinal Endoscopy

Manuscript NO: 65867

Title: EUS-Guided Biliary Drainage: Are We There Yet?

Reviewer's code: 05548747

Position: Peer Reviewer

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Reviewer's Country/Territory: Japan

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Scientific quality	<input type="checkbox"/> Grade A: Excellent <input type="checkbox"/> Grade B: Very good <input checked="" type="checkbox"/> Grade C: Good <input type="checkbox"/> Grade D: Fair <input type="checkbox"/> Grade E: Do not publish
Language quality	<input checked="" type="checkbox"/> Grade A: Priority publishing <input type="checkbox"/> Grade B: Minor language polishing <input type="checkbox"/> Grade C: A great deal of language polishing <input type="checkbox"/> Grade D: Rejection
Conclusion	<input type="checkbox"/> Accept (High priority) <input type="checkbox"/> Accept (General priority) <input type="checkbox"/> Minor revision <input checked="" type="checkbox"/> Major revision <input type="checkbox"/> Rejection
Re-review	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Peer-reviewer statements	Peer-Review: <input checked="" type="checkbox"/> Anonymous <input type="checkbox"/> Onymous Conflicts-of-Interest: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No



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SPECIFIC COMMENTS TO AUTHORS

Comment to the Authors This is a review article of EUS-BD. Many EUS-BD reports are being considered. This is a very interesting subject for an endosonographer, and I have a number of queries for the authors. 1) The text discusses uncovered SEMS with EUS-CDS, but is there currently any report of EUS-CDS with UC-SEMS? How are the results of those reports? 2) Stent patency in EUS-CDS and EUS-HGS has not been studied, but what is the reported patency in both SEMS and PS? 3) Recently, there have been many reports of EUS-BD in combination with duodenal stents. Please discuss the results of the reports with double stenting (duodenal stenting and EUS-BD). 4) Is it correct to recognize EDGE as EUS-BD?

PEER-REVIEW REPORT

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Manuscript NO: 65867

Title: EUS-Guided Biliary Drainage: Are We There Yet?

Reviewer's code: 05190212

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Academic degree: MD, PhD

Professional title: Consultant Physician-Scientist

Reviewer's Country/Territory: Italy

Author's Country/Territory: United States

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Scientific quality	<input type="checkbox"/> Grade A: Excellent <input type="checkbox"/> Grade B: Very good <input checked="" type="checkbox"/> Grade C: Good <input type="checkbox"/> Grade D: Fair <input type="checkbox"/> Grade E: Do not publish
Language quality	<input type="checkbox"/> Grade A: Priority publishing <input checked="" type="checkbox"/> Grade B: Minor language polishing <input type="checkbox"/> Grade C: A great deal of language polishing <input type="checkbox"/> Grade D: Rejection
Conclusion	<input type="checkbox"/> Accept (High priority) <input type="checkbox"/> Accept (General priority) <input checked="" type="checkbox"/> Minor revision <input type="checkbox"/> Major revision <input type="checkbox"/> Rejection
Re-review	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Peer-reviewer statements	Peer-Review: <input checked="" type="checkbox"/> Anonymous <input type="checkbox"/> Onymous Conflicts-of-Interest: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

SPECIFIC COMMENTS TO AUTHORS

I read with interest the paper by Pawa et al., presenting a complete review regarding EUS-guided biliary drainage. The manuscript is well-written and methodologically valid, providing a detailed description of the indications to EUS-guided biliary drainage, of the available techniques to perform it and of the procedures' technical and clinical success and of the possible complications. The abstract summarize and reflect the work described in the manuscript. However the paper has some criticisms that should be modified:

In the introduction:

- In the citation 13-14, after "fewer adverse events" I would add "and better quality of life".
- After the end of Introduction I would add a paragraph titled "EUS-guided biliary drainage procedures" and consider the following titles as sub-paragraphs.

In the paragraph EUS-guided RV:

- Maybe the term "branch" would be better than "radical" (even in the Figure 2).
- Please correct 0.025 or 0.035 inch (instead of in).
- When you cite reference [18], after "in the trans-hepatic group" please add "and longer duration of hospitalization (2.52 vs 0.17 days; $p=0.0015$). So the extra-hepatic route should be preferred for EUS-RV in patients with distal CBD obstruction when both access routes are technically feasible." Add citation: Tsuchiya T, et al. Endoscopic ultrasonography-guided rendezvous technique. Digestive Endoscopy 2016; 28 (suppl. 1); 96-101.
- What did you mean with "while in the biliary system"? - Change "which allows" with "allowing".
- When you cite Lee et al. instead of "undergoing precut papillectomy alone" put "in which only precut papillectomy was available for failed cannulation".
- Before citation [24], "... due to high success rate in high-skilled in ERCP endoscopists, and lack of"

In the paragraph EUS-guided Choledocoduodenostomy:

- Add to "The conventional technique", defined as Multi Step Technique, involves..."
- "Plastic stent were commonly used in the first cases" (instead of "in early cases".
- I would delete the entire sentence "Furthermore..... with UC-SEMS", as the uncovered SEMS are not indicated in this setting in which a fistulous

tract must be covered by a stent. - At the end of the page, It would be better to anticipate the sentence "A prospective study of.... and functional success (100%)." before the sentence "Despite achieving...." - Maybe the technique of realising LAMS should be better described, for example free-hand or use of guidewire... - After citation [42], the high clinical success of the study population is influenced by the limited follow-up; in fact 27 patients have a follow-up < 4 weeks and were not evaluated in terms of clinical success and need of biliary re-intervention. - Modify the sentence "The transduodenal LAMS did not impede surgery thereby suggesting that EUS-CDS can be performed in patients with resectable malignancy" with "The transduodenal LAMS did not impede surgery thereby suggesting that EUS-CDS can be performed EVEN in patients with resectable malignancy". In the EUS-guided Hepaticogastrostomy:

- "After confirmation of needle placement into the duct" please add "by aspiration of bile and cholangiogram".
- When you describe the DH group of the Park study please describe in detailed the device (7 Fr, etc).
- The study by Cho et al. using a novel hybrid metal stent is not present among the references and it must be cited.
- Please describe this hybrid metal stent. Are the authors sure that this stent is available only in Korea and not currently available worldwide, because as far as we know it should be available in Europe.
- Please continue the sentence "However, 33% of patients eventually suffered RBO requiring re-intervention", with "... due to the hyperplastic ingrowth of the uncovered flange".
- Please cite "especially bile leakage" among the adverse events. The higher rate of reintervention is not statistically significant ($p = 0.25$) and it should be underlined.
- In the final part of HBO, please add after "Both techniques are challenging and only a small number of cases have been reported to date [66]" "only in referral center".

In the paragraph EUS-guided CDS vs EUS-guided HGS: -In the third line invert "to" and "due". - "The choice betweensite of obstruction, OPERATOR EXPERTICE and location of biliary dilation". - The authors say that



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“EUS-CDS is not feasible in patients with proximal MBO or GOO.” This affirmation is not always true for GOO, because if the stricture is localized in the second portion of duodenum, leaving the duodenal bulb free and not preventing to create a choledocho-duodenal fistula. Please argue this issue. It is not clear if the cases described in the figure have been managed by the authors. Figure 1. Could the authors explain the reason to place a double pigtail inside the LAMS? The procedure is described and used for EUS-HGS to prevent the migration of FC-SEMS (as in Figure 2). It is not clear the rational in EUSCDS using LAMS. Please argue this aspect. Figure 2. Could the authors explain the cause of biliary strictures? Figure 3. EUS-guided gallbladder. D. The patency of cystic duct should be evaluated before LAMS placement, to avoid an ineffective gallbladder drainage.

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Name of journal: World Journal of Gastrointestinal Endoscopy

Manuscript NO: 65867

Title: EUS-Guided Biliary Drainage: Are We There Yet?

Reviewer's code: 03474794

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Professional title: Deputy Director

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Scientific quality	<input type="checkbox"/> Grade A: Excellent <input type="checkbox"/> Grade B: Very good <input checked="" type="checkbox"/> Grade C: Good <input type="checkbox"/> Grade D: Fair <input type="checkbox"/> Grade E: Do not publish
Language quality	<input type="checkbox"/> Grade A: Priority publishing <input checked="" type="checkbox"/> Grade B: Minor language polishing <input type="checkbox"/> Grade C: A great deal of language polishing <input type="checkbox"/> Grade D: Rejection
Conclusion	<input type="checkbox"/> Accept (High priority) <input checked="" type="checkbox"/> Accept (General priority) <input type="checkbox"/> Minor revision <input type="checkbox"/> Major revision <input type="checkbox"/> Rejection
Re-review	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Peer-reviewer statements	Peer-Review: <input checked="" type="checkbox"/> Anonymous <input type="checkbox"/> Onymous Conflicts-of-Interest: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

SPECIFIC COMMENTS TO AUTHORS

Pawa et al. describes the current view of EUS-guided biliary drainage. They mention a variety of approach into the bile ducts and the gall bladder very meticulously, and sites representative papers for each procedure. The review is understandable and important to figure out the entire concept of the complexing procedure, there are several issues which seem to be modified. Major 1. I agree with the LAMS is an appropriate device for the EUS-CDS, the stent has been mainly used for EUS-guided cystic drainage and has not been spread to use in the EUS-CDS, because it is expensive and the primary or distal flange may be unexpectedly deployed between the bile duct wall and duodenum wall. In some countries, furthermore, it has even been prohibited to be used for EUS-CDS or Gallbladder drainage unless the IRB in the institution has been approved. I would suggest to write the additional comment to describe the usage of the LAM for EUS-BD can be acceptable while the real use of the LAMS should be careful because of its price and the adverse effect. 2. In the session of EUS-Guided Choledochoduodenostomy, a unique plastic stent named X-T stent, TYPE IT, Gadelius Medical Co., Tokyo, Japan) should be described (Gastrointestinal Endoscopy 82(2); DOI: 10.1016/j.gie.2015.02.041) as an alternative stent for the procedure. 3. EUS-AG can be described in the session of EUS-RV as well to make it understandable more clearly. 4. Authors mentions that adverse events in the EUS-HGS are higher than the ones in the EUS-CDS. However, it is controversial now and a meta-analysis states EUS-CDS and EUS-HGS have equal efficacy and safety (J Clin Gastroenterol. 2018 Feb;52(2):123-130.). Moreover, EUS-HGS can avoid the severe adverse events such as portal vein or CBD injury. Please describe the opposite opinions as a review. Minor revisions 1. In the Abstract, "Risk of procedure-related complication, such as bleeding, bile leak and stent occlusion, is not negligible." Should be "Risk of procedure-related complication, such as bleeding, bile leak and stent occlusion, are not negligible." 2. I think the headquarter of



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Covidien/Medtronic is in Durbin, Ireland. Otherwise, the operational headquarter in the US is in Minneapolis, MN. Please check the location of the company. 3. In the session of EUS-guided Choledochoduodenostomy versus EUS-guided Hepaticogastrostomy, “likely to due a number of factors including the precise puncture of smaller caliber intrahepatic bile ducts” should be “likely due to a number of factors including the precise puncture of smaller caliber intrahepatic bile ducts”.