

## ANSWERING REVIEWERS

**Name of journal:** World Journal of Gastrointestinal Endoscopy

**ESPS manuscript NO:** 24771

**Title:** Single port laparoscopic liver surgery: A minireview

Dear Editor,

I want to thank Reviewers for the comments which help me to prepare the manuscript better.

Reviewer 1:

Comment: History: Line 4: "First report of SIL-LLR": Brunner W, Schirnhof J, Waldstein-Wartenberg N, Frass R, Weiss H. New: Single-incision transumbilical laparoscopic surgery. Eur Surg. 2009;3:98-103

**Reply:** The mentioned paper is: Single incision laparoscopic sigmoid colon resection without visible scar: a novel technique. In my manuscript I mentioned the first single port laparoscopic liver resection is published by Aldrighetti L in 2010

Comment: Indications and Contraindications: "Tumors that require a big incision to remove the resected specimen are against the SPLS mentality .." The mentality of SIL is to reduce the surgical trauma. As long as the incision for specimen retrieval is kept smaller than for open surgery SIL provides this benefit over open and standard laparoscopic surgery. The last paragraph is misleading in the same sense.

Reply: You are right. SILS is always better than open surgery if the incision is smaller than the open surgery but the available SILS port are maximum 5 cm in diameter.

Technical difficulties: Line 18: "...it is very difficult to stop parenchymal bleeding by SPLS". There is a valuable paper published recently to overcome these limitations (J Hepatobiliary Pancreat Sci. 2015 Dec;22(12):831-6. doi: 10.1002/jhbp.295. Inline radiofrequency pre-coagulation simplifies single-incision laparoscopic minor liver resection. Weiss M, Mittermair C, Brunner E, Schirnhöfer J, Obrist C, Pimpl K, Hell T, Weiss H.)

Reply: I added this paper to my manuscript as reference 39. The reference numbers from 39 to 45 are all changed

Comment: Oncological concerns: Line 10: "...recommend making 5 cm incisions for single-port laparoscopic liver resections in patients with malignant lesions, as this would make surgical handling relatively easy." Instrument handling does not define the length of incision which is rather defined by the minimum diameter of the specimen. Squeezing the specimen in a retrieval bag does not compromise pathohistological staging.

Reply: The 5 cm single-ports have 4 access which makes the surgery easier than the 2.5 cm SILS ports with 3 access. We mentioned "The surgical margin can be broken during to remove a 5 cm tumor from the 2.5 cm incision"

Comment: Disadvantages: Line 4: "...increasing the cost of the operation". LLR requires vessel sealing instruments, staplers etc. all of those are by far more expensive than a port (e.g. handmade ports) or a reusable bent instrument.

Answer: I agree but here I especially mentioned " the articulating specific surgical instruments may be necessary during deep parenchymal resection"

I rewrite the sentence as " The articulating specific surgical instruments may be necessary during deep parenchymal resection, which may not be easily available in all institutions, thus increasing the cost of the operation (15, 21, 22, 25)." I deleted special ports from the sentence.

Comment: Line 7: "...The presence of severe adhesions can diminish the number of patients suitable for this technique, even if the tumor is small and peripherally located" This is a obstacle in all types of laparoscopy but not selectively for SIL. Many authors report uneventfull redo-SIL procedures regardless of any adhesions.

Reply: Previous operations are not a contraindication for SILS but failure of SILS is more than failure of laparoscopy after previous operations.

Comment: Line 22: "...the depth of the subcutaneous fatty tissue may not allow the placement of the single port." Obese are prone to complications for many reasons but very rarely because of the incapability to place a port.

Reply: Since the length of the SILS port are around 5 cm, if an obese patient has a subcutaneous fatty tissue like 10 cm, we will be unable to place the port. The port has to be between skin and the fascia. It is not appropriate to place the port in to the subcutaneous fatty tissue.

Comment: Line 25: "...More blood loss can occur in cirrhotic patients during SPL-LR than during laparoscopic liver resections or major hepatic resections" This does not make sense since SIL is laparoscopic surgery and does not result in more blood loss than in major resections.

Reply: If bleeding occurs during parenchymal resection it takes longer to stop bleeding during single incision laparoscopic liver resection since there is limited number of ports and view during transection. Sometimes the camera fails to show bleeding source because of the alignment of all instruments.

Comment: Figure 5: This figure is not representative for SIL-LLR as most attention is paid on bloodless surgery to receive a scarless result.

Reply: I deleted the figure 5 upon the editors' comment and rename the figures 6 and 7.

## Reviewer 2:

Comment: A good review of a relatively new minimally invasive procedure, fairly comprehensive inclusive of the limitations of indications, limitations of procedural details and other learning curve concerns . But it should be remembered that to date level evidence in favour of the single incision lap approach for any organ surgery is for the cosmetic advantage of the transumbilical approach so is the single approach really worthwhile? This awaits further evidence .

Reply: I thank reviewer for his/her comments. SILS is a new version of conventional laparoscopy and there is no evidence that it will replace the conventional laparoscopy. It is a technique that can be applied to selected patients.