Author's response to reviews

Title: Early experience with Single-Incision Laparoscopic Surgery (SILS) for the placement of a gastrostomy in a 10-year-old girl: a case report

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Responses to Associate Editor and Referees, Journal of Medical Case Reports

Vanderlinden et al, MSID 6498254666896272

Letter to Associate Editor with restatement of comments (italic print), followed by our responses.

Comments:

This report appears to be a combination of the initial procedure developed by Keith Georgeson with single incision approach of Todd Ponsky. I would like the authors to clarify exactly what the contribution here is.

Response:

We thank the referee for the constructive comments, and changed our manuscript accordingly.

In our SILS technique it was possible to explore the whole abdomen, as in the procedures described in the revised manuscript, but it was also possible to use extra instruments to push away the liver and spleen to allow optimal visualization of the stomach because of an enormous hepato- and splenomegaly.

So we added in the text: "For the placement of a gastrostomy in children different techniques are described in literature. The laparoscopic U-stitch technique, first described by Georgeson in 1993, allows primary button placement and the advantages of laparoscopy. It enables direct visualization of the intraperitoneal anatomy, greatly minimizing the risk of hollow viscous or vascular injury (13). Kawahara et al reported a single-port technique using a 15-mm incision and operating laparoscope (14). Ponsky et al described a single-site laparoscopic gastrostomy with a 4-mm bronchoscopic optical grasp, which is a minimal invasive procedure that provides direct visualization through one 5-mm"
abdominal port (15). In our SILS technique it was possible to explore the whole abdomen, as in the procedures described above, but it was also possible to use extra instruments to push away the liver and spleen to allow optimal visualization of the stomach and perfect intraperitoneal anatomy." on page 4.

Comments:

In addition to the reviewers and the associate editor's comments please also address the following formatting changes required for your paper:

1. Please include the ethnicity of the patient in the abstract
2. In keeping with journal style, please remove the sub-headings from the case presentation section.

Response:

1. We include "of caucasian ethnicity" on page 2 and 3.
2. We removed the sub-headings from the case presentation section on pages 3 and 4.

Letter to Referee 1 with restatement of comments (italic print), followed by our responses.

Referee 1: Dr Timothy Kane

Comments:

- This is an acceptable approach for placing gastrostomy tube in a child. The use of SILS although becoming more widely utilized must take into account the benefits and advantage to the patients.

- Cosmesis is not significantly better by utilizing the authors approach for example in comparison to Georgeson's technique.

- It is also more costly likely due to the use of the SILS port by Covidien as compared to a single 5 mm port at umbilicus or even reusable 4 mm trocar for this procedure.

Response:

- The difference with the procedures described by Georgeson and Ponsky, is the use of the SILS-port®, that gives us the possibility to use one or two extra instruments which was necessary to grasp the somewhat 'hidden' stomach between the enormous liver and spleen due to hepatomegaly and splenomegaly.

The following text is added on page 4: "For the placement of a gastrostomy in children different techniques are described in literature. The laparoscopic U-stitch technique, first described by Georgeson in 1993, allows primary button placement and the advantages of laparoscopy. It enables direct visualization of the intraperitoneal anatomy, greatly minimizing the risk of hollow viscous or
vascular injury (13). Kawahara et al reported a single-port technique using a 15-mm incision and operating laparoscope (14). Ponsky et al described a single-site laparoscopic gastrostomy with a 4-mm bronchoscopic optical grasp, which is a minimal invasive procedure that provides direct visualization through one 5-mm abdominal port (15). In our SILS technique it was possible to explore the whole abdomen, as in the procedures described above, but it was also possible to use extra instruments to push away the liver and spleen to allow optimal visualization of the stomach and perfect intraperitoneal anatomy."

- Cosmetic result is the same as in the technique of Georgeson and Ponsky, because of the unique incision in the umbilicus.

- Because of the cost it is not a technique to use in all pediatric patients who need a gastrostomy. Although it is a good technique for specific cases in which it can be difficult to see or grasp the stomach with only one instrument, as in our case because of hepatomegaly and splenomegaly. In SILS we can use more instruments to manipulate the organs.

The procedure is more expensive than conventional procedures for the placement of a gastrostomy but in our case it was very important to have a good view of the stomach because of the 'hidden' position of the stomach because of the enormous liver and spleen. Another option in our case was possible a laparoscopic procedure. The cost of the SILS port® is nearly the same as the 3 or 4 trocars for the laparoscopy. We recommend the use of conventional laparoscopic instruments to keep the procedure cost equal to conventional laparoscopic surgery.

Letter to Referee 2 with restatement of comments (italic print), followed by our responses.

Referee 2: Dr Erwin Vanderveken

Comments:
Upper half umbilical incision still leaves a (small) scar which will grow with the patient. Maybe you should do it transumbilically in order to have no scar at all.

Response:
As Dr Timothy Kane (Referee 1) also remarked, this comment is absolutely correct. Normally in SILS procedures, we make an incision into the umbilicus in order to make it a scarless procedure, but in this case we decided to make a supraumbilical incision to correct the umbilical hernia at the same time.

So we added the text on page 4: "The cosmetic result of this SILS procedure is excellent, with the scar above the umbilicus. A virtually scarless surgery is important in pediatric patients, as a scar is a stigma for life. Normally in SILS procedures, we make an incision into the umbilicus in order to make it a scarless procedure, but in this case we decided to make a supraumbilical incision to correct the umbilical hernia at the same time."
Comments:
Reduction of possible injury to intra-abdominal organs is not a good argument in my opinion: conventional open laparoscopy (no Verres needle) with introduction of several other ports under direct vision is as safe as the SILS approach.

Response:
We agree with the comment of Dr Vanderveken that the use of conventional open laparoscopic procedure without Veress needle is as save as the SILS approach.

Comments:
Articulated instruments are already on the market for several years (but expensive), a flexible tip 5 mm laparoscope has just arrived (Endoeye Flex from Olympus).

Response:
As Dr Vanderveken indicated there is a continue evolution of the SILS instruments. Although, if possible, we try to use the conventional straight forward instruments to reduce the cost of the SILS procedures.