

Peer Review File

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Reviewer A

Comment 1: Please add annotations to background anatomy for all figures.

Reply 1: We added annotations to back ground anatomy for all figures.

Comment 2: Please provide a figure for the ultrasonic scalpel. Please provide a clear picture of the scissors in figure 1.

Reply 2: We provided figures for the ultrasonic scalpel and SynchroSeal, and exchanged figure 1.

Comment 3: Rademark and location of all devices should be mentioned.

Reply 3: We mentioned trademark and location of all devices.

Reviewer B

Comment: It provides a basic introduction to energy devices for robotic oesophagectomy and is considered textbook useful. As a narrative review, I think it is acceptable. Is the "supine" position in the title correct?

Reply: I made a mistake, so I corrected "supine" to "prone".

Reviewer C

Comment 1: Need to talk about the long bi-polar grasper, not just the Maryland bipolar. The tip is longer and less sharp in comparison.

Need to discuss the SynchroSeal-I exclusively use this instrument for the abdominal portion, as it takes the short gastric with ease and has a more accurate/less bulky tip when compared to the vessel sealer. In addition, this helps with speed in dissection when compared to the vessel sealer.

Reply 1: We described feature of Long Maryland (Line 119-32) and SynchroSeal (Line 196-211).

Line 119-32- Long Maryland bipolar grasper[®] (Intuitive Surgical, Inc., Sunnyvale, CA USA) are another feasible option. A notable difference between these forceps and Cadiere forceps is that if the hand control in the surgeon's console is 30 degrees open, Cadiere forceps would be 30 degrees open; Maryland bipolar forceps would be 45

degrees open, and long Maryland bipolar grasper would be 70 degrees open. In other words, the opening angle of hand control in the surgeon's console and the opening angle of most instruments in the patient cart are not the same, particularly in the case of the long Maryland bipolar grasper, which would be open at an angle that is more than twice that of the hand control. As such, it is necessary to operate with greater care when using these instruments. The tip of the long Maryland bipolar grasper is slightly blunt and unsuitable for precise dissection, but has the advantage of versatility because it can grip the tissue more delicately than fenestrated forceps. It is particularly suitable, for example, in tissue traction as forceps to be held in the operator's left hand during recurrent laryngeal lymph node dissection (*Figure 3*).

Line 196-211- **SynchroSeal**

Improvements to the generator system have accelerated the sealing process and made it possible to use SynchroSeal[®] (Intuitive Surgical, Inc., Sunnyvale, CA USA). SynchroSeal is intended for grasping, dissection, sealing and transection of tissue (17, 18). SynchroSeal enables a secure seal and clean cut in vessels up to 5 mm in diameter with only 1–2 mm of lateral thermal spread, coupled with a faster cooldown time, helping the surgeon move onto the next task without unnecessary waiting time. In addition, the refined, curved jaw with 60° wristed articulation makes it easy to dissect and provides a secure tissue grasp (17, 18). SynchroSeal offers enhanced efficiency through simplified operation and fast activation time. The disadvantage is that the sealed tissue cannot be cut off to the tip as well as the vessel sealer. Due to the slightly weaker cutting ability, it may be necessary to strain the tissue or rotate the device slightly.

As mentioned above, due to the tip of the SynchroSeal being finely divided as compared to that of the vessel sealer, it is suitable for bilateral main bronchus lymph node and subcarinal lymph node excision, which requires relatively precise manipulation (*Figure 6*).

Comment 2:

Line

62-Delete “for esophageal cancer” after esophagectomy.

Reply: We deleted “for esophageal cancer” after esophagectomy.

66- Needs source after sentence that ends with word axis.

Reply: Reference has been provided.

Reference 3.

86-Why limit it to short term outcomes, why not do both short and long-term outcomes?

Reply: Since the publication of the treatise on robot-assisted esophagectomy began around 2004, we specified the period for which the paper was searched. The search period has been deleted.

123-24- Wording of sentence is confusing. Could replace with “Thus, we believe that bipolar forceps can be used in all parts of esophagectomy. Resection can occur with bipolar forceps alone, but operating times tend to be longer.” If that is what you are saying, I would be careful because I do not think the bipolar is strong enough to take the short gastric vessels during conduit creation.

Reply: I made a confusing sentence. We interchanged following sentence “Thus, we believe that bipolar forceps can be used in all parts of esophagectomy procedures and can be resected with bipolar forceps only, but operating time tends to be longer.” to “Thus, we believe that bipolar forceps can be used in all steps of esophagectomy procedures and can be used for resection by occasionally securing hemostasis using the clip, at the cost of longer surgical time.”

Comment 3: The discussion needs to be more robust. You discuss extensively about esophagectomy but then in the discussion this is not related to the esophagectomy at all. Maybe if you could discuss the advantages of the energy device during the specific portion of the case. Meaning, say, this type of energy device is an advantage to this part of the case compared to this other device and why? By doing that, it would make this paper stronger.

Reply 3: We described the suitable operative part to each device in **Features of various devices** section and summarized in **Discussion** section (Line 217-234).

We described following sentences “Esophageal cancer is associated with a higher frequency of lymph node metastasis than other gastrointestinal cancers; additionally, the metastasis is widespread, necessitating reliable lymph node dissection. Furthermore, precise surgical techniques aimed at avoiding recurrent laryngeal nerve palsy and preserving function are needed, but there are restrictions on the movement of forceps due to the limited space between the ribs in thoracoscopic surgery. In addition, although there is a high risk of critical injury to other organs in conventional thoracoscopic surgery due to heartbeat and respiratory fluctuations, which are felt in the surgical field, robotic surgery with stable surgical field deployment and tremor filtering control seems to be the most suitable modality for esophagectomy.

In conclusion, monopolar scissors are suitable for precise and meticulous dissection, and sharp dissection using scissors without an electrical source is recommended to avoid secondary damage to adjacent organs in recurrent laryngeal lymph node dissection. Long Maryland bipolar grasper is suitable for use as grasping forceps, which can delicately grasp and dissect tissue. Vessel sealers, SynchroSeal, and ultrasonic scalpels have reliable hemostatic ability, making these devices suitable for sharp transection of the endpoint in lymph node dissection. SynchroSeal has particularly narrow lateral thermal spread, making it suitable for excision of the pericardium and pericardial surfaces. However, ultrasonic scalpels may have limited use due to the lack of articulating function.”