

## Peer Review File

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### Reviewer A

#### General comments

**Comment 1:** The objectives of the study is to assess the educational value of YouTube surgical videos of thulium laser enucleation of the prostate (ThuLEP). Although the study is interested, the reviewer found the unclear points in the study design.

**Reply 1:** Thank you for your reviewing work. We have revised the manuscript according to your suggestions.

#### Specific comments

##### Major criticism

**Comment 2:** The rightfulness of the process to create the new check list should be mentioned in the methods or discussion.

**Reply 2:** Thank you for your suggestion. We have added essential information to explain this point.

Changes in the text: see Materials and Methods, Page 5-6, line 107-118; Discussion, Page 9-10, line 195-203.

**Comment 3:** The evaluation process of the check list is unclear. How evaluated? What experienced surgeon? More detail information should be mentioned in the methods.

**Reply 3:** Thank you for your reminding. We have added the evaluation process in the methods. Two surgeons are the urologists in our center whose major work is the treatment of prostatic diseases. Both of them have the experience of ThuLEP surgery more than 300 cases. They are also responsible for the training and education of residents. This study was also inspired by the work of surgical education.

Changes in the text: see Page 5-6, line 104-115

**Comment 4:** What was “image quality” in the results? The evaluation should be added to the methods.

**Reply 4:** OK. We have added the explanation of image quality (low: 480p resolution, moderate: 720p resolution, high: 1080p resolution).

Changes in the text: see Page 5, line 110-111

**Comment 5:** Only two authors were enough to evaluate the videos?

**Reply 5:** Thank you for your reminding. At the beginning of this study, we had planned to invite more surgeons to evaluate the videos independently, then we calculated the mean score for each option. But we found it was very difficult to get the accurate data. In the created checklist, the choice for each option are Yes or No. It was a qualitative assessment. So, we finally arranged two surgeons to

assess the videos together. We had to admit this method had its inevitable limitations.

**Comment 6:** For the objectives of the study, it is inappropriate to compare the educational score and the number of views. Therefore, it is difficult to lead the present conclusion.

**Reply 6:** Thank you. When we search a video on the YouTube platform, the relevance is divided by upload date, view count, rating. The audience may choose “view count” when they search ThuLEP videos. However, the YouTube platform is a non-scientific video platform. We hypothesized the educational score of ThuLEP surgery is not related to the number of views. The final results actually supported this hypothesis. We hope that the beginner of ThuLEP surgery could choose high quality educational surgical videos on the YouTube platform. Changes in the text: see Page 2, line 45-48

### **Reviewer B**

**Comment 1:** The idea of analyzing each included Youtube surgical video with well-designed checklist is adorable.

**Reply 1:** Thank you for your encouragement.

**Comment 2:** However the enrolled videos were overwhelmingly uploaded from Asian countries. To better evaluate the quality of worldwide videos on Youtube, American or European videos should not be inadvertently overlooked.

**Reply 2:** We also found this interesting result after we included the videos. To avoid selection bias as possible as we can, we searched the videos on YouTube platform by using the search terms “thulium laser enucleation of the prostate” and “ThuLEP”. The inclusion criteria include: enucleation of the prostate must be performed by thulium laser, live surgery recorded by endoscopic camera (no schematized video, cartoon, or multiple surgeries), professional videos made by professionals (not promotional videos or commercial advertisements), **English language**. The video must be showed using English language. Non-English videos were all excluded. We also noted that 24% (17/70) of videos didn’t contain the information of surgeons’ country. (see Material and Methods section)

### **Reviewer C**

**Comment 1:** YouTube is an incredible platform to present your surgical videos easily.

The authors analyzed ThuLEP videos with regard to the educational value of these videos. This is a nice idea.

**Reply 1:** Thank you for your encouragement.

**Comment 2:** However, you cannot apply a scientific benchmark on a non-scientific video platform. They do not have any scientific publication guidelines (and that the positiv aspect of youtube: fast and democratic publication to

everyone). Therefore, the major drawback is the creation of the checklist for analysing the videos.

**Reply 2:** We are agreed with you! YouTube is a non-scientific video platform which provide various videos for the public. It has become an important educational tool for some surgical residents or self-educated beginner. We also support that YouTube platform keeps its fast and democratic aspect. The aim of our study is to provide some recommendations to the urological residents or self-educated beginner of ThuLEP surgery when they are searching and looking these surgical videos.

In addition, the evaluation checklist was just used to assess the educational value in this study. It can't represent the evaluation standard as the lack of a generally accepted checklist for ThuLEP educational video. We also admit that the checklist had its limitation.

**Comment 3:** The authors define somewhat arbitrarily a list of 20 items (and they that they are important....) like author information, outcomes of the procedure, weight of prostatic specimen (?).etc. In my opinion, this is not helpful for the audience.

**Reply 3:** Yes, different audience has different understanding and opinion for the same video. If we wanted to evaluate the educational value of a video, we had to set criteria. The checklist for the evaluation of ThuLEP surgical videos' educational value was created referred to LAParoscopic surgery Video Educational GuidelineS (LAP-VEGaS) which is a published consensus statement about how to report a laparoscopic surgical video for educational purposes. These items may provide the audience more comprehensive understanding about ThuLEP surgical video, especially for the beginner.

**Comment 4:** YouTube is not a scientific platform - but there are some (EndoSociety, EAU etc).

**Reply 4:** Yes. We have noted that many urological journals and scholar societies provide high quality videos and encourage authors to submit videos. But very few of them are open access and most of them are not free. Although YouTube is not a scientific platform, some studies have revealed that YouTube is the most frequently used video source for surgical learning and preparation (Rapp AK, et al. 2016) (Mota P, et al. 2018) (Celentano V, et al. 2019). Another attraction for the audience is that The YouTube platform is a free and open platform.

#### **Reviewer D**

**Comment 1:** This study evaluates YouTube surgical videos of thulium laser enucleation of the prostate (ThuLEP). These videos can be used for educational purposes. In total, 70 videos were scrutinized and analyzed by 2 experienced surgeons who have completed more than 100 ThuLEP operations. The evaluation criteria for assessing the surgical videos were created by the authors and were not previously used or validated. This study will help beginners to identify and

select the most useful videos regarding ThuLEP, currently available on the YouTube platform. There are also some drawbacks which should be highlighted:

**Reply 1:** Thank you for your reviewing work. We have revised the manuscript as your suggestions.

**Comment 2:** Methods. Which LAP-VEGaS criteria were used to develop the guidelines for ThuLEP? What were the critical structural differences?

**Reply 2:** Thank you for your suggestion. We have added the further explanation in text. We referred to the structure of LAP-VEGaS Practice Guidelines to create a novel educational checklist for ThuLEP video which mainly contained five categories and 20 items. Five categories include Authors' Information and Video Introduction, Case presentation, Demonstration of the surgical procedure, Outcomes of the procedure, Associated educational content. The major differences between LAP-VEGaS and ThuLEP checklist were demonstration of the surgical procedure and outcomes of the procedure.

Changes in the text: see Page 5, line111-115

**Comment 3:** Results. We are not told if there was any disagreement amongst the experts when it came to establishing the assessment criteria. Ideally, this information should be added.

**Reply 3:** Thank you. We have added this useful information. No disagreement between two experts occurred when establishing and evaluating the videos.

Changes in the text: see Page 5, line 110-113; Page 6, line 123-125; Page 7, line 147-148

### Minor comments

**Comment 4:** There are a number of typos and grammatical errors. We recommend that the paper is proof-read by a native speaker.

**Reply 4:** Thank you. We have corrected the errors and invited English native speaker to help us to revise manuscript.

Changes in the text: see the Text

