

YouTube Robotic Cholecystectomies; Rated R



Adam Swiger, D.O., Joshua Phillips, M.D.,
Azzan Arif, M.D., Peter DeVito, M.D.
Western Reserve Health Education, Warren, Ohio



Introduction

Minimally invasive cholecystectomies are one of the most commonly performed surgeries and considered the standard of care in the United States. The issue with minimally invasive techniques is the increase in common bile duct injuries, and the morbidity, mortality, and cost associated with those injuries. With the increasing popularity of social media and video uploading platforms; paired with the increasing advent of minimally invasive surgical modalities, videos are becoming an invaluable source of education, both for surgeons and trainees. YouTube has made this method easily accessible and abundant; however, video content is based on popularity, not quality. There is not a governing body policing the surgical quality of videos being uploaded, which can lead to the mass viewing of videos demonstrating poor surgical technique. This raises the question, “Is it safe to learn and immolate surgery based on YouTube videos, particularly robotic cholecystectomies?”

Methods

Using SAGES’ Safe Cholecystectomy Program as a foundation, “Robotic Cholecystectomy” was searched on YouTube. Animations and lectures were excluded. The top 25 most-viewed robotic cholecystectomy videos, regardless of the number of incisions used, and were analyzed by 3 independent viewers. The videos were given a score of one, two, or three; based on the completion of the three steps required to adequately dissect out the CVS.

Critical View of Safety

- 1.) The hepatocystic triangle is cleared of fat and fibrous tissue.
- 2.) The lower one third of the gallbladder is separated from the liver to expose the cystic plate.
- 3.) Two and only two structures should be seen entering the gallbladder.

Results

Only 4 videos performed all three steps required to adequately portray the CVS, with a mean score of 2.1. The most commonly omitted step in obtaining the CVS is the dissecting off of the lower 1/3rd of the gallbladder to expose the cystic plate.

Conclusion

Collectively, the most-viewed robotic cholecystectomy videos on YouTube demonstrated poor technique, with only one video performing the complete dissection demonstrating the CVS. Surgeons and surgical trainees should exercise caution when viewing YouTube videos, and seek out platforms where videos are critically acclaimed by experts in the field.

Acknowledgment

- 1.) Kern KA. Malpractice litigation involving laparoscopic cholecystectomy. Cost, cause, and consequences. Archives of Surgery 1997; 132:392-7; discussion 7-8
- 2.) Global evaluative assessment of robotic skills: validation of a clinical assessment tool to measure robotic surgical skills. Alvin C. Goh, David W. Goldfarb, James C. Sander, Brian J. Miles, Brian J. Dunkin J Urol. 2012 Jan; 187(1): 247–252. Published online 2011 Nov 17. doi: 10.1016/j.juro.2011.09.032
- 3.) Strasberg SM, Brunt LM. Rationale and use of the critical view of safety in laparoscopic cholecystectomy. Journal of the American College of Surgeons 2010; 211:132-8.
- 4.) Sanford DE, Strasberg SM. A simple effective method for generation of a permanent record of the Critical View of Safety during laparoscopic cholecystectomy by intraoperative “doublet” photography. Journal of the American College of Surgeons 2014; 218:170-8
- 5.) Rodriguez HA, Young MT, Jackson HT, Oelschlager BK, Wright AS. Viewer discretion advised: is YouTube a friend or foe in surgical education?. *Surg Endosc.* 2018;32(4):1724-1728. doi:10.1007/s00464-017-5853-x
- 6.) SAGES: Safe Cholecystectomy Program