

No advantages to using robot-assisted laparoscopic cholecystectomy

Clinical question	How effective is robot-assisted laparoscopic cholecystectomy?
Bottom line	Compared to human-assisted laparoscopic cholecystectomy, robot assisted surgery is safe but does not offer any advantages. There was no statistically significant difference between the two groups for morbidity, conversion to open cholecystectomy, total operating time, or hospital stay. The instrument set-up time was significantly lower in the human assistant group. In 2 of the 3 trials that reported surgeons' preference, the surgeons preferred a robot assistant to a human assistant. Based on the current available evidence, robot-assisted surgery should not replace human assistants in workforce planning.
Caveat	All trials were at high risk of bias. In one trial, about one-sixth of the laparoscopic cholecystectomies in which robot assistance was used, required temporary use of a human assistant. The reviewers were unable to identify trials comparing one type of robot assistant with another.
Context	About 10-15% of the adult Western population have gallstones ^{1,2} and between 1% and 4% become symptomatic in a year. ^{1,2} The role of a robotic assistant in laparoscopic cholecystectomy is controversial.
Cochrane Systematic Review	Gurusamy KS et al. Robot assistant for laparoscopic cholecystectomy. Cochrane Reviews 2009, Issue 1. Article No. CD006578. DOI:10.1002/14651858.CD006578.pub.2. This review contains 5 trials involving 453 participants.
PEARLS No. 193, August 2009, written by Brian R McAvoy	

[References]

1. NIH. Gallstones and laparoscopic cholecystectomy. 1992. http://consensus.nih.gov/1992/1992GallstonesLaparoscopy_090html.htm.
2. Halldestam I et al. Brit J Surg 2004;91:734-38.

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