Poster 34: Surgical outcomes for robotic-assisted single-site hysterectomy as compared to multi-site hysterectomy: a single institution retrospective study

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Topic: Other (Robotic surgery outcomes)

Objectives

Robotic-assisted minimally invasive surgery is considered safe and effective in gynecologic oncology. While traditional multi-site robotic surgery remains the standard, single-site robotic surgery is often thought to have additional benefits related to cosmesis, length of hospital stays, and other perioperative outcomes. However, comparison studies between the two surgical approaches are lacking. The purpose of this study is to assess the surgical outcomes of robotic-assisted single-site hysterectomy (SSH) as compared to multi-site hysterectomy (MSH).

Methods

Patients who underwent SSH and MSH from October 2013-June 2022 at a single institution were identified using case log data from the daVinci® Surgical System. Clinical data regarding preoperative, intraoperative, and postoperative variables were then extrapolated from the electronic medical record for analysis using logistic regression for binary outcomes and linear regression for continuous outcomes. Propensity score matching using a 1:1 model was conducted as sensitivity analysis.

Results

A total of 572 patients met inclusion criteria, with 127 undergoing SSH and 445 undergoing MSH. When comparing SSH with MSH, median operative times were 118 minutes for SSH versus 162 minutes for MSH ($p< 0.001$). The plurality (47%) of SSH patients had estimated blood loss of < 50 mL compared to 50-99 mL for the plurality (36%) of MSH patients. 23% of SSH patients were discharged on the day of surgery compared to only 8% of MSH patients ($p< 0.001$). The maximum length of postoperative admission was 3 days for SSH patients and 8 days for MSH. There were no statistically significant differences seen between SSH and MSH when comparing rates of conversion to laparotomy or ED presentation, readmission, reoperation, postoperative infection, vaginal cuff dehiscence, urinary tract or bowel injury, ileus, or small bowel obstruction within 30 days postoperatively. These results were consistent in the sensitivity analysis.

Conclusions

SSH has overall good outcomes including decreased operative times, lower amounts of blood loss, and decreased lengths of postoperative hospital stays when compared to MSH. Given these benefits, SSH may be a surgical modality with utility in gynecologic oncology patients.