

SIMULATED LAPAROSCOPIC SIGMOIDECTOMY TRAINING: RESPONSIVENESS OF SURGERY RESIDENTS.

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Purpose: This study aimed to evaluate the responsiveness of surgery residents to simulated laparoscopic sigmoidectomy (SLS) training.

Methods: Residents underwent SLS training for previously tattooed cancer using disposable abdominal trays in a hybrid simulator (ProMIS). The six sequential steps included splenic flexure mobilization, division of inferior mesenteric vessels (IMVs), identification of left ureter, mobilization of sigmoid, transection of rectosigmoid, and anastomosis. After baseline testing and training, residents were tested with previously determined passing scores. Content validity was defined as the extent to which outcome measures departed from clinical reality. Content valid measures from the trays were evaluated by two blinded raters. Simulator generated metrics were path length and smoothness of movements. Responsiveness was defined as change in performance over time and was assessed by comparing baseline testing with un-mentored final testing. Values are given as medians.

Results: Over 8 weeks, 8 PGY 3/4 residents performed 34 resections. Overall time (67 vs 37 min, p=0.005), flexure time (10 vs 5 min, p=0.005), IMV time (8 vs 5 min, p=0.04), and ureter time (7 vs 1 min, p=0.003) improved significantly. There was a linear relationship between advanced clinical laparoscopic case volume and responsiveness (r=-0.7, p=0.04). IMA stump length (3 cm), anastomotic distance from anal verge (16 cm), angle of rectal transection (81 degrees), specimen length (20 cm), proximal margin (6 cm), distal margin (12 cm), path length (26702 mm), and smoothness (2921 cm/sec³) remained unchanged. There were 2 bowel perforations and 19 anastomotic leaks. Anastomotic leak rate decreased from 87% to 12.5%. A strong correlation was found between path length and smoothness (r=0.9, p<0.001). Simulator metrics were not correlated with content valid measures. Interrater reliability was 1.0 for most measures except anastomotic leak (k=0.56).

Conclusions: SLS training resulted in significantly decreased operating time and anastomotic leak rate for all residents.

ASCRS RESIDENCY TRAINING AFTER THE COST TRIAL: ARE OUR FELLOWS PRIMED TO PERFORM LAPAROSCOPIC COLECTOMY?

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Purpose: The ability to perform laparoscopic colectomy (LC) is an integral part of a young colorectal surgeon's practice. Whether new surgeons feel comfortable performing LC upon completion of their fellowship is unknown. We aim to investigate the number of cases required in fellowship to feel comfortable and how that translates into post fellowship practice patterns.

Methods: An electronic survey designed by ASCRS Young Surgeons Committee was sent to 342 graduates of ASCRS fellowships from 2004-2008. Data collected included demographics and number of laparoscopic right (LR), laparoscopic left (LL) and hand-assisted left (HAL) colectomy cases performed during residency. Trainees were asked to assess if they were very comfortable, somewhat comfortable or not comfortable, with each case at the completion of their fellowship.

Results: 176 (51%) surgeons responded to the survey. 42 (24%) reported performing <10 LRs during fellowship, 108 (61%) performed 10-30, and 24 (14%) performed >30. 13 (7.5%) respondents were not comfortable, 42 (21%) were somewhat comfortable and 119 (68%) were very comfortable with LR. For LL, 58 (34.8%) performed <10, 92 (52.6%) performed 10-30, and 22 (12.6%) >30. Of those, 12.2% were not comfortable, 33.7% somewhat comfortable, and 54.1% very comfortable. For HALS: 83 (47.4%) performed <10, 68 (38.9%) performed 10-30, 24 (13.7%) performed >30. 14.9% were not comfortable, 31.6% somewhat comfortable, and only 53.4% very comfortable. 90% of fellows performing 30 or greater LR, LL or HALS were very comfortable, yet less than 50% of those performing fewer than 30 LR, LL or HALS procedures were very comfortable. Each year's graduating fellows were more comfortable with LC than in previous years (p=0.02). Respondents in practice 2-5 years recorded performing <10 cases LR 25%, LL 41%, HAL 40.4%.

Conclusions: A significant number of fellows graduating from ASCRS fellowships are not very comfortable performing LC, despite requiring only 10 LR and 30 LL to obtain comfort. This translates to a significant number of young practitioners who perform few LC in practice. These trends should be examined to produce fellows who are primed for practice at the end of the fellowship.

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	No Anastomosis N=1,032	Anastomosis N=1,032	P value
Post Surgery Length of Stay (days)	15.6± 16.2	14.4± 14.3	0.061
Surgical Site Infection	18.2 (188)	19.4 (200)	0.50
Septic Shock	13.0 (134)	12.7 (131)	0.84
30-day Mortality	12.3 (127)	15.5 (160)	0.036

Continuous variables are reported as N ± standard deviation. Categorical variables are reported as % (N)

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