

and z-axis: experts 0.024, -0.065 and 0.016 N vs novices -0.024, -0.023 and 0.021 N ($p = 0.05, 0.131$ and 0.906 respectively).

Conclusion: The force measurement platform provides us with the unique possibility to objectively assess forces used during tissue handling tasks in a laboratory setting. Experts seem to have superior tissue handling skills compared to novices in laparoscopic suturing. This is expressed by lower maximum forces, lower volume (precision parameter) and different direction of applied forces which indicate better and more precise control of the forces needed to perform the task. Real time force feedback could facilitate training of tissue handling skills in complex laparoscopic tasks which might stimulate learning curves of trainees. Therefore this innovative instrument is a valuable addition to motion tracking systems.

55 Open Communications 3—Education (12:11 PM — 12:16 PM)

Total Laparoscopic Hysterectomy: Evaluation of an Evidence-Based Educational Strategy

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Study Objective: The purpose of this study was to evaluate subjective perceptions of skills and practice patterns of gynecologists attending a course on total laparoscopic hysterectomy (TLH) and advanced pelvic procedures.

Design: Analysis of data from a survey distributed in the first hour of a course on TLH, compared with the same survey returned three months after the course. Data were analyzed by paired t-tests, McNemar's Chi Squares, and ANCOVAs with significance set at $p < 0.05$.

Setting: 216 gynecologists attending the course returned the pre-course survey, and of these, 102 returned the second survey.

Patients: The typical participant was female (62.6%), did not complete a fellowship (90%), and had an average age of 44.7 years. There were no significant differences in age or gender in responders versus non-responders.

Intervention: Comparisons were made between respondents pre-course and post-course survey data.

Measurements and Main Results: Among all course participants, 4.9% were residents, 77.0% were in private practice, and 18.1% were in university practice. Both surgeons' subjective perceptions of skill level and the percent of minimally invasive surgical procedures in their practices increased significantly three months after the course. Work in the cadaver lab and presence of their practice partner resulted in no significant subjective differences in numbers of minimally invasive surgical procedures or in surgeons' self rated skill.

Conclusion: A comprehensive course focused on TLH has a positive impact on attendees' self-rated skill level. At three months after the course, the surgeons attending the course had increased their rate of laparoscopic approaches, and many were performing TLH. These courses appear to have a role in the teaching of advanced laparoscopic procedures to surgeons.

56 Open Communications 3—Education (12:17 PM — 12:22 PM)

The Canadian Hysterectomy Educational Experience: A Survey of Obstetricians and Gynecology Recent Graduates

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Study Objective: This study aims to determine the hysterectomy surgical training acquired by recent Canadian obstetrics and gynecology graduates, their comfort level performing different types of hysterectomies and their practice plans.

Design: A national survey was designed to determine the hysterectomy surgical training received by obstetrics and gynecology residents across Canada and their practice plans. It was electronically distributed to 289 recent graduates (2005-2010).

Measurements and Main Results: The response rate was 37% (107 respondents). In the laparoscopic hysterectomy categories, 56% performed ≤ 5 laparoscopic sub-total hysterectomies (LSTH), 69.1% performed ≤ 5 total laparoscopic hysterectomies (TLH) and 43.9% performed ≤ 5 laparoscopic-assisted vaginal hysterectomies (LAVH) in residency. Conversely, 64.5% performed at least 50 abdominal hysterectomies (AH) and 57.1% performed at least 21 vaginal hysterectomies (VH). While the majority reported that they were comfortable performing AH (99%) and VH (87%), fewer were comfortable performing LAVH (63.4%), LSTH (42%) and TLH (26%). Only 40.2%, 60.9% and 69.7% plan on performing LSTH, TLH and LAVH, respectively, in their practices. There was a trend towards increasing comfort level with laparoscopic hysterectomy as the year of graduation increased, but no difference in practice plans. Most respondents gain further surgical proficiency through fellowship training and colleague preceptorship.

Conclusion: Although laparoscopic hysterectomy has substantial benefits compared to laparotomy, Canadian obstetrics and gynecology residents are not receiving adequate training to feel comfortable using the laparoscopic approach, as opposed to the vaginal and abdominal routes. To improve patient care, further educational initiatives are needed to ensure graduates are capable of performing all types of hysterectomies.

57 Open Communications 3—Education (12:23 PM — 12:28 PM)

Laparoscopic Training of Residents in Gynecology: The French Experience

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Study Objective: To assess the educational value of a 6-day intensive laparoscopic training course among French Obstetrics and Gynecology residents.

Design: The 6-day course was split into two separate 3-day long programs, conducted 2 months' apart, totaling 18 hours of theoretical instructions and 35 hours of practical training on pelvi-trainer and alive anesthetized pigs. Prospective evaluation in pre-set exercises assessing progress was individually performed.

Setting: Endoscopic training laboratory (CICE, Clermont-Ferrand, France).

Patients: From 2006 to 2009, 191 French Obstetrics and Gynecology residents with little or no experience in laparoscopy attended this training course.

Intervention: Laparoscopic suturing on pelvi-trainers and laparoscopic nephrectomy done on an anesthetized porcine model.

Measurements and Main Results: Time taken to perform laparoscopic intracorporeal knots was controlled. Surgical skills were also evaluated according a scoring system. Laparoscopic nephrectomy was assessed in terms of operative time and scored according to a modified OSATS system adapted to laparoscopy. Parameters evaluated included: ergonomics, tissue manipulation, bleeding, extra-corporeal knot tying, electrosurgery knowledge and general surgical strategy. Significant improvement in median suturing times (291 vs 116 s, $p < 0.0001$) and technical scores (2.7 vs 4.1, $p < 0.0001$) was noted between day 1 and 6 with the right hand. Similar results were observed with left hand.