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8549 Simplifying Laparoscopic Suturing for the Gynecologic Trainee: A Systematic Approach for Reproducible Needle Handling

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Setting: Intra-operative video recordings from various patient encounters.

Patients or Participants: Patients were undergoing minimally invasive gynecologic surgery at a tertiary care center.

Interventions: Three interventions are demonstrated: 1) simplified steps to culdotomy without a uterine manipulator 2) use of a Bovie to activate a laparoscopic instrument 3) steps to backfilling the bladder and performing a bladder survey with a 30-degree laparoscope.

Measurements and Main Results: Safe and efficient care of patients.

Conclusion: These simple techniques are helpful when encountering an unexpected situation, they allow the surgeon to move forward safely and efficiently.

8549 Simplifying Laparoscopic Suturing for the Gynecologic Trainee: A Systematic Approach for Reproducible Needle Handling

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Study Objective: Laparoscopic suturing and needle handling are core components of gynecologic surgical management of many benign and malignant disease processes. Adoption of a reproducible technique for laparoscopic needle loading and handling is beneficial for the gynecologic trainee.

Design: Educational demonstration of a surgical technique.

Setting: The demonstration of this method is shown in a laparoscopic simulator trainer with a vaginal cuff model.

Patients or Participants: N/A.

Interventions: This video demonstrates a 3-step approach for safe and efficient needling loading and handling in a simulation environment.

1. Grasp the suture one to two centimeters from the swaged end of the needle to serve as the fulcrum of movement.
2. Lightly grasp the body of the needle so it may act as a pendulum for the swing.
3. Maintain tension on the suture to allow for needle rotation.

Measurements and Main Results: N/A

Conclusion: Mastering laparoscopic needle handling and suturing are important fundamentals of gynecologic laparoscopic surgery. The swing technique may be used in a variety of port configurations making it adaptable and transferable across a wide setting of operations. Additionally, it uses minimal needle grasps for increased safety and efficiency. Learning this reproducible and methodical swing technique may help develop safe and efficient needle handling practices for the gynecologic trainee.

8551 Investigating the Impact of the Addition of a MIGS Surgeon on Surgical Volume of General Obstetrics and Gynecology

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Study Objective: The primary objective was to determine whether adding a fellowship-trained minimally invasive gynecologic surgeon (FMIGS) would decrease the surgical volumes of physicians in other subspecialties within an academic obstetrics and gynecology (Obstetrics and Gynecology) department.

Design: The study compared case type and quantity, and case minutes of general Obstetrics and Gynecology, Female Pelvic Medicine & Reconstructive Surgery (FPMRS), and Reproductive Endocrinology & Infertility (REI) physicians before and after the addition of a FMIGS-trained surgeon. "Before" was academic years 2015-16 and 2016-17. "After" was academic years 2017-18, 2018-19, 2019-20, and 2020-21.

Setting: An academic Obstetrics and Gynecology department that grew from twelve to twenty surgeons from AY 2015-21.

Patients or Participants: All general Obstetrics and Gynecology, REI, and FPMRS physicians within an academic Obstetrics and Gynecology department.

Interventions: Surgical data including numbers of surgeries, categorized by major and minor, with and without endometriosis, and total case minutes from all general Obstetrics and Gynecology, REI, and FPMRS physicians from AY 2015-21 were collected for each academic year. Clinical full-time equivalents (FTE) per academic year, adjusted for hire date and medical leaves, were also collected.

Major cases included hysterectomy, laparoscopic or abdominal myomectomy, and sacrocolpexy. Minor cases included other laparoscopies, hysteroscopy, dilation and curettage, and suburethral slings. Endometriosis had its own sub-category due to the wide range of associated surgical interventions.

Measurements and Main Results: The FMIGS surgical volume grew from 95 cases to 213 cases in four years. Case volumes did not change for any subspecialty after the hire of the FMIGS surgeon, with and without adjustment for FTE, or when sub-categorized into major, minor, and endometriosis cases. Case duration did not show any change before and after the addition of the FMIGS surgeon.

Conclusion: The addition of a FMIGS-trained surgeon to this department's surgical practice did not decrease surgical volumes for the other sub-specialties. This information can help overcome concerns of other members of the faculty when considering whether to hire a FMIGS-trained surgeon.

8553 The Effect of Obesity on the Accuracy of Uterine Weight Estimation and Impact on Hysterectomy Outcomes

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Study Objective: Determine the effect of obesity on the accuracy of uterine weight estimation by bimanual exam (BME) and transvaginal ultrasonography and evaluate the impact on hysterectomy outcomes including surgical route and operative complications.

Design: Retrospective cohort study.

Setting: Large academic medical center.

Patients or Participants: 1297 patients who underwent hysterectomy for benign indications at Parkland Hospital by generalists and Minimally Invasive Gynecologic Surgery (MIGS) fellowship-trained gynecologists between 01/2016 to 06/2018.

Interventions: Data was collected from electronic medical records up to 6 months after hysterectomy. Surgeon type and mode of hysterectomy were compared. Resident physicians performed preoperative BME to determine estimated uterine size by gestational age, which was then converted to clinical uterine weight (grams) using mean weights for uteri between 6-26 weeks. For ultrasound weight, the equation: weight (g) = 50.0 + 0.71 x volume (cc) was used. Actual uterine weight was collected from surgical pathology data.

Measurements and Main Results: There was a significant correlation between both ultrasound-converted weight and pathology weight ($r=0.81$, $p<0.001$), and BME clinical weight and pathology weight ($r=0.70$, $p<0.001$). The correlation between ultrasound estimation and actual weight did not statistically differ between obese and non-obese populations ($p=0.06$). The correlation between BME estimation and actual weight did statistically differ between obese and non-obese populations ($p<0.001$). Most hysterectomies performed by MIGS surgeons were laparoscopic (59%) and generalists were open (50%). With uteri up to 22 weeks, MIGS surgeons performed significantly more laparoscopic hysterectomies than generalist surgeons regardless of obesity class ($p<0.05$). Complication rates did not statistically differ in obese versus non-obese populations ($p>0.05$).

Conclusion: BME estimation was affected by obesity and had a stronger correlation with actual weight in obese patients. Regardless of obesity class or uterine size, more MIGS surgeons chose a laparoscopic route while generalist surgeons chose open. Despite MIGS surgeons performing minimally invasive hysterectomies in more surgically complex cases, there were no differences in complication rates.