Plenary 4 - Robotics

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Plenary 4 - Robotics

Moderator: Bala Bhagavath, Jessica Vaught

Faculty: Rachel L. Barr, Arpit Dave, Lena El Hachem, Julia Keltz, Adrian K. Krause, Mija R. Lee, Jamal Mourad, Stacey A. Scheib, Fevzi Shakir, Bethany D. Skinner

This session provides a range of studies on topics of clinical importance related to performing robot assisted laparoscopic surgery safely and effectively.

**Learning Objectives:** At the conclusion of this course, the clinician will be able to: 1) Review feasibility outcome and learning curve for robotic single site laparoscopic surgeries; and 2) assess factors contributing to longer recovery times after robot assisted laparoscopic surgery.

**Course Outline**

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L. El Hachem

5:00 Adjourn
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The following members of AAGL have been involved in the educational planning of this workshop and have no conflict of interest to disclose (in alphabetical order by last name).
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Bethany D. Skinner*
Jessica Vaught
Speakers Bureau: Ethicon Women’s Health & Urology, Intuitive Surgical

Asterisk (*) denotes no financial relationships to disclose.
Factors Contributing to Longer Recovery Times After Major Robotic-Assisted Gynecologic Surgery

Julia Keltz, MD
AAGL Global Congress on Minimally Invasive Gynecology
Vancouver, British Columbia
11/19/2014

Study Objective

• To evaluate which factors are associated with longer recovery times in the post anesthesia care unit after major gynecology robotic-assisted surgery

Background

• It is important to study our techniques to improve patient outcomes
• Robotic myomectomy and hysterectomy are associated with
  • lower estimated blood loss
  • fewer complications
  • shorter hospital stays
• A recent study compared patient satisfaction after abdominal, laparoscopic, and robotic hysterectomy
  • Robotic hysterectomy had the greatest rated patient satisfaction

Methods

• Retrospective cohort study
• Robotic hysterectomy or myomectomy
• January 2013 – February 2014
• NYU Langone Medical Center
• Cases identified using robotic gynecologic case list

Disclosures

• I have no financial relationships to disclose
Methods

- **Primary Outcome:**
  - Recovery time in the post anesthesia care unit
- **Independent Variables:**
  - Age
  - Body Mass Index (BMI)
  - Estimated blood loss (EBL)
  - Specimen Weight
  - Anesthesia Time
  - Surgery Time
  - Pre-op Hemoglobin/Hematocrit
  - Past Medical History of Asthma, Tobacco use, Hypertension and Diabetes
  - Prior abdominal surgery

Results

- **Anesthesia Time:** 75% of cases within 200mins (3hrs 20mins)
  - Mean = 168mins (2hrs 48mins)
  - Median = 157mins (2hrs 37mins)
- **Surgical Time:** 75% of cases within 180mins (3hrs)
  - Mean = 134mins (2hrs 14mins)
  - Median = 127mins (2hrs 7mins)
- **Recovery Time:** 75% within 360mins (6hrs)
  - Mean = 296mins (4hrs 58mins)
  - Median = 274mins (4hrs 34mins)

Results

<table>
<thead>
<tr>
<th>Independent Variables</th>
<th>Odds Ratio</th>
<th>P - Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Surgical Time (&gt;180min)</td>
<td>0.95</td>
<td>0.905</td>
</tr>
<tr>
<td>Anesthesia Time (&gt;200min)</td>
<td>0.99</td>
<td>0.821</td>
</tr>
<tr>
<td>Age</td>
<td>1.00</td>
<td>0.685</td>
</tr>
<tr>
<td>EBL &gt;100</td>
<td>1.49</td>
<td>0.269</td>
</tr>
<tr>
<td>BMI &gt;30</td>
<td>0.60</td>
<td>0.012</td>
</tr>
<tr>
<td>Asthma</td>
<td>3.29</td>
<td>0.027</td>
</tr>
<tr>
<td>Smoker</td>
<td>2.42</td>
<td>0.067</td>
</tr>
</tbody>
</table>

Multivariable logistic regression looking at the effect of these independent variables on recovery time >6hr.

Discussion

- Asthma is independently associated with longer recovery time
- Potential pulmonary compromise
  - Deep Trendelenburg positioning
  - CO₂ pneumoperitoneum
  - Schrijvers D. et al.: ventilation effects minimal and return to baseline after resuming supine positioning
- BMI > 30 had shorter recovery times
  - Obesity is not a risk factor for poor robotic surgical outcome
  - Further studies needed
- Limitations:
  - Retrospective chart review
  - Small sample size – not powered well
  - Excluded patients who were admitted
Discussion

• Further research needed

• Expand the study

• Evaluate the patients who were admitted and factors associated with admission

Acknowledgements

• Principle Investigator: Kathy Huang, MD.
  Alyson Grant, MD.
  Veronica Ades, MD., MPH.

• NYU Langone Medical Center:
  Department of Obstetrics and Gynecology

References


Comparison between 3D and Robotic Surgery in Novice Surgeons – A Randomised Trial

Dr Fevzi Shakir MBBS BSc (Hons) MRCOG
Senior Clinical Research Fellow in Advanced Gynaecological Laparoscopic Surgery

19 November 2014
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Egerton Road, Guildford, GU2 7XX, UK

Introduction

• The performance of robotic laparoscopy is significantly enhanced by stereoscopic vision (Jourdan et al., 2004).

• 3D has shown proven benefit compared with 2D in terms of time of task performance and reduction in error rate (Smith et al., 2012; Storz et al., 2012).

• In addition as an individuals learning curve improves task performance and error reduction also is superior with the 3D compared to 2D systems (Smith et al., 2012).

• 35.8% quicker, 62% fewer errors in Novice surgeons (Smith et al., 2012).

• 35% quicker and 62% fewer errors in experts (article in press Smith et al., 2014).

Objective

• To evaluate if this improvement is more so when 3D is compared to the Da Vinci Robot S system, where the articulated instruments provide a theoretical benefit.

Setting and Design

• 20 Novice doctors/medical students from the RSCH were recruited.

• Randomised by using an opaque envelope to perform four surgical skills tasks either using the passive stereoscopic display followed by the Da Vinci Robot or in the reverse order.

• The validated tasks with pre defined errors include rope pass, paper cut, needle capping and knot tying (Jourdan et al., 2004). Each participant performed 10 attempts of each in a laparoscopic/ robotic box trainer.

• Subjects were provided with a video demonstration of the preferred technique prior to performing each skills task.

Methods

Disclosure

I have no financial relationships to disclose.
Methods

Each participant was asked to perform the tasks as quickly and as accurately as possible.

The time taken per task and the error rate were then recorded.

Results

• The interface and articulation provided by the robot with novice surgeons resulted in an overall total improved:
  - task performance time by 54.2%
  - reduction in error rate 47.6%
  - compared with 3D straight stick.

• Interesting to see if this benefit is also true of experienced laparoscopic surgeons and if this benefit translates to the clinical operative setting.
References


Smith et al. (2014). Passive polarising 3D displays provide significant benefit to experienced laparoscopic surgeons, BJS – article in press.
“No Needle” Robotic Transabdominal Cerclage Placement at 13 Weeks Gestation
Jamal Mourad, DO
From: Banner Good Samaritan Medical Center and
The University of Arizona College of Medicine, Phoenix AZ

**Study Objective:** To demonstrate a minimally invasive and safe surgical approach to placement of a transabdominal cerclage (TAC) in a pregnant patient.

**Design:** Video narrative description of the entire procedure highlighting.

**Setting:** Cervical insufficiency is relatively rare in the United States, occurring in only 1–2% of all pregnancies, but it is thought to cause as many as 20—25% of all pregnancy loss in the second trimester. The American College of Obstetricians and Gynecologists (ACOG) defines cervical insufficiency as the inability of the uterine cervix to retain a pregnancy in the absence of the signs and symptoms of clinical contractions, labor or both in the second trimester. Transabdominal placement of a cerclage at the cervicoisthmic junction is generally accepted as a safe and effective procedure for reducing the incidence of second and third trimester pregnancy loss in patients with cervical insufficiency. Although the procedure can be performed via laparotomy, the morbidity and risks associated with an “open approach” may influence the patient and the provider against it. With the advances in technology allowing for more complex procedures to be performed in a minimally invasive approach, the ability to place the cerclage tape at the exact location, in a safe, efficient and effective manner is desirable.

**Intervention:** A minimally invasive “needless” approach to placement of a transabdominal cerclage in a pregnant patient using robotic assisted technology.

**Results:** Successful completion of the procedure in 1 hour, blood loss < 20cc, patient discharged home within 24 hours. Pregnancy delivered at 37 weeks via c-section without complications.

**Conclusion:** This minimally invasive technique for TAC placement during pregnancy is a safe and effective alternative to traditional placement via laparotomy incision. This approach allows for less morbidity, faster recovery, less blood loss and quicker return to normal activity without jeopardizing pregnancy outcomes.
Traditional Laparoscopy and Robotics

- MIS is the standard treatment for many gynecologic disease processes.
- Laparoscopic and robotic approaches to various gynecologic conditions improve quality of life with comparable or improved surgical outcomes compared to standard open abdominal procedures.\(^1\)\(^\text{a} \)\(^\text{b} \)\(^\text{c} \)
- Multiport laparoscopic surgery is not without risks.
  - 3 to 5 trocar incisions, including rectus muscle-splitting incisions.
  - ↑ risk of morbidity associated with multiple incisions.
  - A 5% risk of clinically significant neuropathic pain at the site of lower quadrant abdominal trocar incisions was reported.\(^7\)

LESS

- A less invasive alternative to multiport laparoscopy\(^8\)\(^\text{-11}\)
- LESS presents unique surgical challenges\(^8\)\(^\text{-11}\)
  - “In-line” surgery
  - Requires advanced laparoscopic skills.
- How to transition to LESS is scarce in the literature.
- Expense and learning curves may be factors deterring universal adoption of LESS.
- Generalizability of this approach has been questioned, given the above factors and need for advanced laparoscopic skills.

Robotic LESS

- May overcome the technical challenges of LESS
- May shorten the learning curve for select surgeons\(^12\),\(^13\)
- May impact the reproducibility and diffusion of LESS.
- The greatest technical challenge with the R-LESS hysterectomy procedures was suturing the vaginal cuff.\(^14\)

Objectives

- Describe the technique for vaginal cuff closure using the R-LESS platform
- Identify optimal utilization and limitations of the R-LESS platform for vaginal cuff closure
- Characterize the learning curve
Methods

• Prospective, IRB-approved study
• TLH for benign conditions
• Inclusion criteria:
  – Uterus ≤14 week size, no evidence of malignancy on
    preoperative imaging or exam, ≤1 vertical midline incision, a
    native umbilicus, and reasonable medical candidates for
    laparoscopic surgery.
• Peri- and post-operative data
• Vaginal cuff closure times
• All patients were examined in the office for 4-6 weeks
  after surgery.

Results

<table>
<thead>
<tr>
<th></th>
<th>Median (range) or n (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of TLHs</td>
<td>23</td>
</tr>
<tr>
<td>Age</td>
<td>41 (21-56)</td>
</tr>
<tr>
<td>BMI</td>
<td>30.7 (15.9-46.3)</td>
</tr>
<tr>
<td>Prior abdominal surgery</td>
<td>12 (52.2%)</td>
</tr>
<tr>
<td>Adhesions</td>
<td>7 (30.4%)</td>
</tr>
<tr>
<td>Time from surgery (days)</td>
<td>376 (195-499)</td>
</tr>
</tbody>
</table>

• 1 case closed vaginally due to difficulty ventilating
  secondary to BMI >45
• 1 case an additional trocar was placed for hemostasis
  during the case but the additional trochar was not
  utilized during the cuff closure.
• No readmissions
• Two minor complications were noted:
  – Cuff cellulitis 2 weeks after surgery
  – Vaginal cuff defect < 1 cm after coitus 8 weeks after
    surgery that was managed conservatively with pelvic
    rest.

Results

• There appeared to be a linear
  relationship between vaginal
  cuff closure time
  with number of
  cases performed

Conclusions

• Semi-rigid instruments that do not
  articulate
  – Closing the cuff and tying knots was more
    akin to conventional laparoscopic than
    robotic techniques.
  – Moving the distal portion of the cannulae in
    closer proximity to the surgical field, as this
    increased the rigidity of the instruments.
Conclusions

- A vaginal closure technique utilizing a puppet stitch and vertical suturing is recommended due to the lack of instrument articulation and limited intracorporeal triangulation.
- The R-LESS platform and instrumentation will require improvements in order for this technique to reach widespread adoption beyond selected centers.

Study Limitations

- Small number of patients in our series
- The surgeon is a high volume conventional LESS surgeon and high volume robotic surgeon.
  - Limit the generalizability of our data.

Study Strengths

- This prospective series represents one of the largest and only to date regarding R-LESS cuff closure
- Offers a critical appraisal of the platform and description of technique

References

Age as a Risk Factor For Perioperative Complications and Morbidity in Robotic Assisted Gynecologic Surgery

Adrian Krause, MD
Kathryn McGonigle, MD
Howard Muntz, MD
Women’s Cancer Care of Seattle
Northwest Hospital, Seattle, WA

Objectives

- Review of data on demographic, perioperative and postoperative outcomes for elderly women compared to younger women undergoing robotic surgery
- An evaluation of the safety of robotic assisted gynecologic surgery for elderly women compared to younger women
- Identification of risk factors associated with higher morbidity for elderly women undergoing robotic assisted surgery

In urogynecologic surgery, age is a risk factor for postoperative mortality

- aOR of mortality for women ≥ age 80 was 13.6 compared to women < age 60
- Mortality rate per 1,000 women is 0.1 for women <60 and 2.8 for women ≥ 80; there was an incremental increase per decade (p<0.01)
- Any postoperative complication was more likely to occur in elderly women (14% vs 20%) with an aOR of 1.4 (p<0.01)

General Surgery: Age and Postop Mortality

- Age related postoperative morbidity increased linearly with each increasing decade in life
- Age related mortality increases exponentially with each increasing decade
  - A 90-99 year old patient has an ~11% mortality risk
- There is no increase in average number and severity of comorbidities after age 70, despite the continued increase in morbidity
- For patients > 80 years of age, predictors of morbidity include transudation, emergent nature, prior weight loss, COPD, and duration of the operation

Minimally invasive surgery: can improved outcomes also benefit the elderly?

- An estimated 6% of the U.S. population is ≥ 75 years of age and patients > age 65 represent 2/3 of new cancer cases
- Benefits of laparoscopic hysterectomy and staging for endometrial cancer:
  - Less blood loss, shorter post operative stay, fewer cases of ileus, incisional complications, and postoperative fever compared to laparotomy
- For robotic assisted laparoscopy (compared to laparotomy):
  - Operative time is longer (244 min. vs. 217 min.)
  - Total blood loss is lower (334 mL vs. 75 mL)
  - There are fewer Dindo-Clavien grade I & II complications, while comparable same grade III & IV complications
  - Length of stay is decreased (3.1 days vs. 8.0 days)

Disclosures

- I have no financial relationships to disclose
Study Methods

- Compared preoperative comorbidities, intraoperative data, and postoperative outcomes of women age ≥75 to women age <75
- Operative data was prospectively collected from 705 consecutive robotic assisted cases from July 2008 through May 2014
- A retrospective medical record review was performed to obtain preoperative comorbidity status and postoperative complications and outcomes

Patient Demographics

<table>
<thead>
<tr>
<th>Variables</th>
<th>Elderly Cohort (n=50)</th>
<th>Young Cohort (n=655)</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>81.3 (75.0-90.0)</td>
<td>52.8 (22.9-74.8)</td>
<td>0.5</td>
</tr>
<tr>
<td>Body Mass Index (kg/m²)</td>
<td>30.9 (19.8-45)</td>
<td>32.2 (15.4-63.9)</td>
<td>0.0160</td>
</tr>
<tr>
<td>Comorbidities</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>COPD</td>
<td>3 (6)</td>
<td>10 (1.5)</td>
<td></td>
</tr>
<tr>
<td>CAD</td>
<td>44 (88)</td>
<td>246 (37.6)</td>
<td></td>
</tr>
<tr>
<td>DM</td>
<td>11 (22)</td>
<td>81 (12.4)</td>
<td></td>
</tr>
<tr>
<td>&gt;1 Abdominal Surgery</td>
<td>7 (14)</td>
<td>176 (26.9)</td>
<td></td>
</tr>
<tr>
<td>Malignancy</td>
<td>45 (90)</td>
<td>283 (43.2)</td>
<td></td>
</tr>
</tbody>
</table>

Operative Data: Procedures Performed

- The elderly cohort tolerated robotic-assisted surgery without an increase in significant morbidity or mortality
  - Mortality rate was not increased in elderly patients
  - No increase in intraoperative injury, blood transfusion or conversion of the procedure
  - No increase in cuff complications, reoperation, or grade > III complications on the Clavien-Dindo classification
  - Length of hospital stay, however, was increased in the elderly patient population (1.11 days vs. 1.66 days; p=0.003)

Intraoperative Data

<table>
<thead>
<tr>
<th>Variables</th>
<th>Elderly Cohort (n=50)</th>
<th>Young Cohort (n=655)</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Procedure</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EBL (cc)</td>
<td>49</td>
<td>648</td>
<td>0.2764</td>
</tr>
<tr>
<td>Total OR time (min)</td>
<td>35</td>
<td>453</td>
<td>0.0566</td>
</tr>
<tr>
<td>Hyst time (min)</td>
<td>21</td>
<td>396</td>
<td>0.1739</td>
</tr>
<tr>
<td>LOS (mean) (days)</td>
<td>50</td>
<td>1.61</td>
<td>0.0029</td>
</tr>
<tr>
<td>Uterine weight (g)</td>
<td>45</td>
<td>126</td>
<td>&lt;0.0001</td>
</tr>
</tbody>
</table>

Postoperative outcomes

- Length of hospital stay, however, was increased in the elderly patient population (1.11 days vs. 1.66 days; p=0.003)
Conclusions: Age is a better predictor of postoperative arrhythmia than a prior history of any CAD/CVD

• Elderly patients:
  – Had a significantly higher rate of CAD/CVD as a preoperative comorbidity
  – Were more likely to be diagnosed with an arrhythmia postoperatively that required cardiology consultation and telemetry monitoring (OR 1.49; p=0.02)
• No patient diagnosed with an arrhythmia was transferred to the ICU
  – One patient in the younger cohort underwent cardioversion
  – No patient had a new diagnosis of acute MI

Limitations of this study

• Selection bias
• Limited sample size of elderly patients
• Lack of follow up data if a patient received care outside of the hospital system

References

1. Sung VW, Weitzen. Effect of patient age on increasing morbidity and mortality following urogynecologic surgery, AJOG 2006;194:1411-17
Paracervical Block of Bupivacaine with Epinephrine Prior to Robotic-Assisted Laparoscopic Myomectomy: A Randomized Placebo-Controlled Trial

Rachel L. Barr Grzesh, MD

Disclosures

- I have no financial relationships to disclose.

Learning Objectives

- At the conclusion of this activity, participants will be able to understand the benefit of the paracervical block in robotic-assisted laparoscopic myomectomy

Background

- Uterine leiomyomas (fibroids) are prevalent in up to 80% of women, almost a quarter with significant symptoms
- Many women with fibroids desire uterine-sparing treatment that allows future childbearing
- Robotic-assisted laparoscopic myomectomy (RALM) offers many benefits

Hypothesis/Objectives

- Hypothesis: Patients receiving a paracervical block before RALM will have lower admission rate to the hospital when compared to patients receiving placebo injections
- Primary outcome: Admission rate after surgery
  - Admission defined as at least one overnight stay in the hospital
- Secondary outcomes:
  - Pain medication use in post anesthesia care unit (PACU) and in first 14 days after surgery
  - Pain scores at postoperative hours 1, 2, and 4 and days 1 and 2
  - Estimated blood loss (EBL)
  - Complications

Paracervical Block

- Preemptive analgesia
- Paracervical block
  - S2-S4 parasympathetic fibers supply the upper vagina, cervix and lower uterus
  - 1st trimester terminations
  - Vaginal hysterectomy

Background

- S2-S4 parasympathetic fibers supply the upper vagina, cervix and lower uterus
- 1st trimester terminations
- Vaginal hysterectomy

Hypothesis/Objectives

- Hypothesis: Patients receiving a paracervical block before RALM will have lower admission rate to the hospital when compared to patients receiving placebo injections
- Primary outcome: Admission rate after surgery
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- Secondary outcomes:
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  - Pain scores at postoperative hours 1, 2, and 4 and days 1 and 2
  - Estimated blood loss (EBL)
  - Complications
Methods

- Study Design: Double blind randomized controlled trial
- Population: 98 subjects scheduled to undergo an ambulatory RALM by a single surgeon at Mount Sinai Hospital in New York from 2011-2013
- Inclusion criteria: Patients ≥18 years old with presumed benign disease
- Exclusion criteria: Immunocompromised, malignant disease, not candidates for robotic surgery
- IRB approved, registered with clinicaltrials.gov

Methods

- Subjects randomized to receive injection of 20 mL of 0.25% bupivacaine with 1:200,000 epinephrine (BE group) or normal saline (NS group)
- Injected in equal parts at 2, 5, 7, and 10 o’clock around cervix
- Randomization used computer-generated plan with random blocks in a 1:1 ratio
- Patients and care providers other than circulating nurse were blinded
- Standardized surgical technique

Results – Baseline Characteristics

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>BE Group (n=46)</th>
<th>NS Group (n=51)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (y)</td>
<td>35.7±5.7</td>
<td>36.9±4.8</td>
</tr>
<tr>
<td>Body mass index (kg/m²)</td>
<td>24.2±5.4</td>
<td>24.5±5.1</td>
</tr>
<tr>
<td>Race</td>
<td></td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>30 (65)</td>
<td>25 (49)</td>
</tr>
<tr>
<td>Black</td>
<td>9 (20)</td>
<td>13 (25)</td>
</tr>
<tr>
<td>Hispanic</td>
<td>2 (4)</td>
<td>7 (14)</td>
</tr>
<tr>
<td>Asian</td>
<td>4 (9)</td>
<td>5 (10)</td>
</tr>
<tr>
<td>Other</td>
<td>1 (2)</td>
<td>1 (2)</td>
</tr>
<tr>
<td>Parity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0</td>
<td>40 (87)</td>
<td>42 (82)</td>
</tr>
<tr>
<td>1</td>
<td>3 (6.5)</td>
<td>5 (10)</td>
</tr>
<tr>
<td>2</td>
<td>3 (6.5)</td>
<td>4 (8)</td>
</tr>
<tr>
<td>Uterine size (weeks)</td>
<td>13.4±3.2</td>
<td>13.8±3.4</td>
</tr>
<tr>
<td>Preoperative hematocrit (%)</td>
<td>37.1±3.1</td>
<td>37.8±3.9</td>
</tr>
<tr>
<td>Admission planned</td>
<td>9 (0)</td>
<td>9 (0)</td>
</tr>
</tbody>
</table>

All data are mean ± standard deviation or n (%). P-value > .05 for all data. 

Results – Admission Rate

<table>
<thead>
<tr>
<th></th>
<th>BE Group (n=46)</th>
<th>NS Group (n=51)</th>
<th>P</th>
<th>Relative Risk [95% CI]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Admission Rate</td>
<td>15% (7)</td>
<td>20% (10)</td>
<td>0.57</td>
<td>0.78 [0.32-1.87]</td>
</tr>
</tbody>
</table>

Two patients in each group had medically-indicated admissions (p=1.0)
- BE group – both for vomiting
- NS group – one for enterotomy with bowel resection, reanastomosis; one for blood loss of 2300ml with transfusion
Results – Pain Medication

<table>
<thead>
<tr>
<th>Variable</th>
<th>BE Group (n=43)</th>
<th>NS Group (n=51)</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>PACU fentanyl use</td>
<td>37 (80%)</td>
<td>45 (88%)</td>
<td>.86</td>
</tr>
<tr>
<td>PACU oxycodone use</td>
<td>31 (67%)</td>
<td>36 (71%)</td>
<td>.86</td>
</tr>
<tr>
<td>Postoperative narcotic rate</td>
<td>0.71</td>
<td>1.01</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Postoperative OTC analgesics</td>
<td>1.21</td>
<td>1.03</td>
<td>.003</td>
</tr>
<tr>
<td>Postoperative days on narcotics</td>
<td>3 (0-10)</td>
<td>4 (0-12)</td>
<td>.52</td>
</tr>
<tr>
<td>Postoperative days on OTC</td>
<td>3 (0-14)</td>
<td>4 (0-13)</td>
<td>.70</td>
</tr>
</tbody>
</table>

All data are n (%) or median [range] unless otherwise indicated.

Results – Pain Scores

<table>
<thead>
<tr>
<th>Time Following Surgery</th>
<th>BE Group</th>
<th>NS Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Hour</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 Hours</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 Day</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Discussion

- Strengths
  - Randomized controlled trial, double blind
  - Large sample size
  - Single surgeon
- Limitations
  - Single surgeon
  - Did not control for additional procedures
  - No preoperative data on pain scores, pain medication use

Conclusion

- Paracervical block of bupivacaine with epinephrine before robotic-assisted laparoscopic myomectomy associated with decreased consumption of postoperative narcotics and lower blood loss
- No difference in postoperative admission rate

References

Optimizing Visualization with a 30º Lens during Robotic Hysterectomy for a Very Large Uterus

Arpit Davé, M.D.
From: Presbyterian/St. Luke’s Hospital, Denver, Colorado

Study Objective: To demonstrate the advantages of using a 30º lens for identification of vascular pedicles and anatomic orientations during robotic hysterectomy for a very large uterus.

Design: Step-by-step explanation of the technique using video (educative video).

Setting: Approximately 40% of all hysterectomies performed in the United States are due to symptomatic leiomyoma. And while abdominal hysterectomy continues to be the predominant approach (1), improved patient outcomes are largely responsible for the growth in the minimally invasive approach. In 2010, 9.5% of all hysterectomies were performed using the aid of a surgical robot (2). As surgeon expertise with this technology continues to improve, more complicated cases including surgery for large uteri are performed. Safe completion of these cases requires an expertise in pelvic anatomy, familiarity with surgical optics and an understanding of how the two interact.

In conventional laparoscopy and robotics, the view through a 0º forward-viewing lens is hindered by a large uterus. Angled lenses optimize visualization in these cases by allowing the surgeon to “see around the corner.” The Da Vinci Si HD Surgical System, however, does not permit rotation of the lens independent of the camera. Angled lenses may be mounted in an “up” or “down” orientation only. In the 30º “up” orientation, the surgeon can slide the camera into the pelvis parallel to a bulky uterus and then rotate the camera-lens unit up to 90º clockwise or counterclockwise to directly visualize and dissect the lateral uterine vasculature and/or the pelvic sidewall. However, unique to fixed camera-lens units like the Da Vinci Si HD system, this rotation results in changes in the apparent absolute orientation of pelvic structures in the surgeon console and operating room monitors because the lens rotates together with the camera head. Frequent reorientation to vital pelvic structures by rotating the camera back to a neutral position avoids confusion and loss of perspective.

We show how to leverage the angled lens to safely dissect the uterine vasculature, describe the new absolute orientations of pelvic structures due to rotation of the camera-lens unit and demonstrate how frequent reorientation permits safe completion of surgery while still benefiting from the angled lens's improved visualization.

Intervention: Supracervical hysterectomy for patients with large fibroid uteri.

Conclusion: Leveraging robotic angled-lens optics enables direct visualization of lateral uterine vascular structures and completion of minimally invasive hysterectomies made difficult by large, bulky uteri. However, surgeons must be vigilant of the new absolute anatomic orientations to prevent injury to
bowel, bladder, vessels and ureters. Clockwise rotation of the camera and lens moves structures counter-clockwise in the view screens and vice versa.

References:


Use of Favorability Index to Determine Surgical Approach to Hysterectomy

Bethany Skinner MD
University of Michigan Medical Center
Ann Arbor, Michigan

Disclosures
• I have no financial relationships to disclose.

Background
• Rates of abdominal hysterectomy (AH) in the US
  – 68.9% (2002) → 54.2% (2010)²
  – Rate of AH declined with uptake of robotic hysterectomy (RH)²
• Vaginal (VH) and laparoscopic (LH) hysterectomy are less morbid⁴
• ACOG and AAGL support minimally invasive routes of hysterectomy⁴,⁵
• Patient characteristics favoring VH⁶,⁷
  – Adequate vaginal access
  – Uterine size ≤ 12 weeks
  – Low concern for extra-uterine pathology
• Limited literature regarding decision-making for approach to hysterectomy

Objective
• To analyze the frequency of VH, LH, RH, and AH when considering parity, prior pelvic surgery, and uterine size
  – What was the rate of VH in women with characteristics favoring this approach?

Methods
• Retrospective cohort study utilizing the Michigan Quality Surgical Collaborative (MSQC)
  – A statewide group of 52 community and academic hospitals reporting perioperative data
• Participants
  – Women undergoing hysterectomy for benign indications
  – January 1, 2013 and December 8, 2013
  – Patients with malignancy, pelvic mass, and atypical endometrial hyperplasia excluded

Favorability Index

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Proxy for:</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parity ≥ 1</td>
<td>Adequate vaginal access</td>
<td>1 point</td>
</tr>
<tr>
<td>Uterine weight &lt; 250 g</td>
<td>Uterine size ≤ 12 weeks</td>
<td>1 point</td>
</tr>
<tr>
<td>No prior pelvic surgery</td>
<td>Low concern for extra-uterine pathology</td>
<td>1 point</td>
</tr>
</tbody>
</table>

• Points were summed, providing a score from 0 to 3
• Surgical approach was analyzed with respect to favorability index
Results

- The cohort included 5212 women

<table>
<thead>
<tr>
<th>Favorability score</th>
<th>Route of hysterectomy (%)</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>VH/LAVH: 6.2, LH: 10.3, RH: 39.2, AH: 44.3</td>
<td>100</td>
</tr>
<tr>
<td>1</td>
<td>VH/LAVH: 13.7, LH: 15.6, RH: 40.6, AH: 30.2</td>
<td>100.1</td>
</tr>
<tr>
<td>2</td>
<td>VH/LAVH: 17.5, LH: 15.3, RH: 46.8, AH: 20.5</td>
<td>100.1</td>
</tr>
<tr>
<td>3</td>
<td>VH/LAVH: 25.5, LH: 16.2, RH: 47.9, AH: 10.3</td>
<td>99.9</td>
</tr>
</tbody>
</table>

Rates of hysterectomy by surgical approach

- Rates of hysterectomy (VH/LAVH: 914, LH: 798, RH: 2350, AH: 1150)

Association between approach to hysterectomy and favorability score

- OR (95% CI) for association between favorability score (ref = 0) and surgical approach RH, LH, VH/LAVH (ref = open)
  - RH: 1.5 (1.1, 2.1), 2.6 (1.9, 3.6), 5.3 (3.6, 7.7)
  - LH: 2.2 (1.3, 3.7), 3.2 (1.9, 5.3), 6.7 (3.9, 11.7)
  - VH/LAVH: 3.6 (1.7, 6.1), 6.2 (3.3, 11.4), 17.7 (9.3, 33.9)

Discussion

- Consistent with national data showing decreasing AH rates
  - Particularly with uptake of RH, which was the most frequent approach in this study
  - VH increased and AH decreased with increasing favorability index, as expected
  - Other factors driving choice of LH and RH are unclear
    - LH stable at low rate, RH stable at high rate
    - Did not vary with patient characteristics examined in this study
    - Some women undergoing LH and RH may have been candidates for VH
    - Lack of any one characteristic favoring VH may lead to decision for LH or RH
    - Increased availability of RH and increased comfort with this technology likely contribute to high RH rate
Discussion

• Strengths
  – Clinically relevant topic
  – Limited data on decision-making regarding approach to hysterectomy
  – Relatively large numbers
  – Diverse practice models included

• Limitations
  – Retrospective study
  – Sample of hysterectomies at participating institutions
  – Limited population (Michigan)
  – Other factors not studied may impact approach to hysterectomy

Conclusions

• Most women in this statewide collaborative underwent minimally invasive hysterectomy
• RH was the most common approach
• Little variation in rates of LH or RH, regardless of favorability index
• Odds of VH increased with increasing favorability index

Future work

• Examination of other factors determining approach to hysterectomy
• Continuation of efforts to increase minimally invasive approaches to hysterectomy

References

Introduction

- Fast-increasing use of robotic surgery system since FDA’s approval for GYN in 2005
- Almost 50% of worldwide robotic cases are GYN procedures
- Robotic surgical systems may offer a healthier work environment for surgeons
- Gynecology ergonomic survey studies:
  - Franasiak et al. (2012): 88% of physical discomforts were associated with MIS
  - McDonald et al. (2014): 72% (robotic surgery), 57% (laparoscopic surgery), 49% (abdominal surgery)

Study objective

- To better understand the ergonomics associated with gynecology robotic surgery:
  - Physical discomfort or symptoms
  - Factors influencing symptom reporting
  - Robotic surgery system components to be improved

Study design, Participants & Statistics

- Anonymous online survey:
  - 20 questions in 4 categories
    - Demographics, systems, ergonomics, and physical symptoms
- Participants: Members of AAGL and SRS
  - Gynecology surgeons who perform more than 10 robotic procedures per year as primary surgeons
- Statistical data analysis: t-test, chi-square test, and logistic regression

Results from 296 Gynecologists

<table>
<thead>
<tr>
<th>Demographics</th>
<th>Data</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>47.5 ± 9.9 years old</td>
</tr>
<tr>
<td>Height</td>
<td>174.1 ± 9.9 cm</td>
</tr>
<tr>
<td>Gender</td>
<td>Male 60% (178), Female 40% (117)</td>
</tr>
</tbody>
</table>
| Specialty    | Gynecology: 90% (267)
GHY: 6.6% (22), Uro-GYN: 3.4% (10) |
| Case number per year | Robotic: 96 ± 90, Laparoscopic: 73 ± 90
Open: 16 ± 34, Endoscopic: 16 ± 38, Hybrid: 3 ± 10 |
| Year of robotic surgery | 4.22 ± 2.17 years |
| Post-residency Practice years | 13.3 ± 10.14 years |
Physical symptoms & discomfort

Body parts: 54% reported

- Finger 24%
- Neck 20%
- Upper Back 16%
- Shoulder 10%
- Wrist 10%
- Lower Back 12%
- Eye 8%

Physical symptoms

<table>
<thead>
<tr>
<th>Symptoms</th>
<th>Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>When do these symptoms bother you?</td>
<td></td>
</tr>
<tr>
<td>Immediately after performing surgery (52.7%)</td>
<td></td>
</tr>
<tr>
<td>While performing surgery (38.8%)</td>
<td></td>
</tr>
<tr>
<td>Persistently (8.5%)</td>
<td></td>
</tr>
<tr>
<td>How do you attempt to minimize these symptoms?</td>
<td></td>
</tr>
<tr>
<td>Ignore the problem (34%)</td>
<td></td>
</tr>
<tr>
<td>Take a break (33.3%)</td>
<td></td>
</tr>
<tr>
<td>Change ergonomics setting (32.7%)</td>
<td></td>
</tr>
</tbody>
</table>

Surgeons with higher case volume reported lower symptom rates (p<.05)

System

- Robotic systems
  - Da Vinci standard (3.4%)
  - Da Vinci S (11.8%)
  - Da Vinci Si (84.8%)

- Chair features
  - Wheels (97.6%), Back support (84.2%)
  - Adjustable height (97.6%), Rotation (94.8%)

- How often do you adjust ergonomic settings
  - Every case (38.7%), Quite often (15.9%)
  - Infrequently (34.2%), Never (11.2%)

Eye fatigue was improved with Si system (p<.05)

Components to be improved for better ergonomics

- Microphone/Speaker: 27%
- Pedal Design: 20%
- Finger clutch: 17%
- 3D Vision: 5%
- Master Controller: 8%
- None: 10%
- Ergo. Setting: 13%
Surgeon console ergonomics

<table>
<thead>
<tr>
<th>Ergonomics</th>
<th>Data</th>
</tr>
</thead>
<tbody>
<tr>
<td>Confidence level of ergonomic setting</td>
<td>3.7 ± 1.0 / 5 (5: most confident)</td>
</tr>
<tr>
<td>Ergonomic setting stored</td>
<td>Yes (85.7%), No (10.2%), No features (4%)</td>
</tr>
<tr>
<td>Ergonomic features helpfulness level</td>
<td>4.0 ± 1.0 / 5 (5: most helpful)</td>
</tr>
<tr>
<td>Communication difficulty with micro/speaker</td>
<td>2.8 ± 1.4 / 5 (5: most difficulties)</td>
</tr>
<tr>
<td>Shoes off</td>
<td>Yes (71.1%), No (28.9%)</td>
</tr>
</tbody>
</table>

Lower physical symptoms were significantly correlated with higher confidence and helpfulness on ergonomic setting ($p<.05$)

Conclusions

- 54% of gynecologic robotic surgeon reported experiencing physical symptoms.
- Higher familiarity to the system with higher robotic case volume and higher confidence level of ergonomic features lead to lower symptom report rate.
- To maximize the ergonomic benefits in robotic surgery, optimal guidelines and its education should take place.

References

Robotic Single-Site Surgery in Gynecology: Feasibility, Surgical Outcome and Learning Curve

Lena El Hachem MD
Mount Sinai Hospital, New York
White Plains Hospital, New York

Disclosure
I have no financial relationships to disclose.

Objective
- At the conclusion of this presentation, the participant will be able to understand:
  - The feasibility of Robotic Single-Site surgery in appropriately selected patients in gynecology
  - The possible challenges and complications of RSS surgery
  - The presence of a rapid learning curve for experienced surgeons

Laparoscopic Single-Site Surgery - LESS
- Novel technique providing potentially superior outcomes when compared to conventional laparoscopy
- Improved cosmetic appearance
- Decreased postoperative pain
- Improved patient satisfaction
- However, technically demanding approach preventing its wide adoption
- Loss of instrument triangulation
- Instrument crowding and clashing
- Need for advanced laparoscopic skills

Robotic Single-Site da Vinci Platform
- Approved by the US FDA in February 2013
- Designed to overcome limitations of LESS
- Offers advantages of a single umbilical incision combined with robotic technology
- Flexible instruments

Objective
- To report the initial experience of a high volume experienced gynecologic surgeon
- To assess the safety, feasibility and perioperative outcomes
- To describe the learning curve associated with implementation of RSS surgery in gynecology
Methods

- Design: Retrospective
- Setting: Community Hospital (White Plains Hospital Center, New York)
- Inclusion criteria: Consecutive RSS gynecologic surgeries performed by a single surgeon between October 2013 and March 2014 using the da Vinci platform
- Patient demographics: age, BMI, prior surgical history, preoperative diagnosis
- Perioperative data: EBL, complications, uterine weight, largest adnexal diameter, operative metrics, LOS

Methods – RSS technique

- Uterine manipulator, Foley catheter
- Single periumbilical incision of 25 mm, open entry technique
- Multi-instrument port introduced, 2 curved cannulas, 1 assistant cannula
- Center docking
- Da Vinci Si 8.5mm endoscope of 0 degrees
- Monopolar hook and bipolar grasper
- Meticulous surgical dissection and selective coagulation to avoid bleeding
- Cuff closure: robotic versus vaginal

Results

- RSS approach attempted in 33 cases
- 25 completed RSS: 11 adnexal cases, 14 hysterectomies (3 requiring pelvic LND)
- 3 aborted prior to docking due to extensive adhesions
- 5 converted intraoperatively to multiport surgery:
  - 3 cases with extensive adhesions
  - 1 case with bleeding and limited exposure to vascular pedicles due to fundal size
  - 1 case with successful RSS BSO followed by laparoscopic staging for ovarian cancer
- No conversions to laparotomy
- No intraoperative complications

<table>
<thead>
<tr>
<th>Case</th>
<th>Age</th>
<th>BMI</th>
<th>Diagnosis</th>
<th>Procedure</th>
<th>Aborted/Converted</th>
<th>Final surgery</th>
<th>Challenge</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>40</td>
<td>26</td>
<td>Fibroid</td>
<td>SCH + BSO</td>
<td>C</td>
<td>RSS + LND</td>
<td>Retraction</td>
</tr>
<tr>
<td>6</td>
<td>69</td>
<td>19</td>
<td>Fibroid, preCa</td>
<td>TH + BSO</td>
<td>C</td>
<td>RSS + LND</td>
<td>Retraction</td>
</tr>
<tr>
<td>10</td>
<td>64</td>
<td>23</td>
<td>Adnexal mass</td>
<td>BSO</td>
<td>A</td>
<td>Laparoscopy</td>
<td>Adhesions</td>
</tr>
<tr>
<td>12</td>
<td>54</td>
<td>39</td>
<td>Fibroid, SCH + BSO</td>
<td>C</td>
<td>Laparoscopy</td>
<td>Bleeding</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>57</td>
<td>29</td>
<td>Adnexal mass</td>
<td>BSO</td>
<td>A</td>
<td>Laparoscopy</td>
<td>Adhesions</td>
</tr>
<tr>
<td>17</td>
<td>69</td>
<td>29</td>
<td>Adnexal mass</td>
<td>BSO</td>
<td>A</td>
<td>Multiport Robot</td>
<td>Adhesions</td>
</tr>
<tr>
<td>21</td>
<td>71</td>
<td>36</td>
<td>Adnexal mass</td>
<td>BSO</td>
<td>C</td>
<td>RSS then laparoscopy for staging</td>
<td>Ovarian cancer</td>
</tr>
<tr>
<td>22</td>
<td>49</td>
<td>22</td>
<td>Adnexal mass</td>
<td>USO</td>
<td>C</td>
<td>Laparoscopy</td>
<td>Adhesions</td>
</tr>
</tbody>
</table>

Table 1: Characteristics of aborted/converted cases

<table>
<thead>
<tr>
<th>Type of procedure</th>
<th>Adnexal cases (n=11)</th>
<th>Hysterectomies (n=14)</th>
<th>All completed cases (n=25)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ovarian cystectomy</td>
<td>2 (18.18%)</td>
<td>0</td>
<td>2 (8%)</td>
</tr>
<tr>
<td>USO/ BSO</td>
<td>9 (81.82%)</td>
<td>10 (71.43%)</td>
<td>12 (48%)</td>
</tr>
<tr>
<td>SCH +/- BSO</td>
<td>0</td>
<td>3 (21.43%)</td>
<td>3 (12%)</td>
</tr>
<tr>
<td>TH = BSO + LND</td>
<td>0</td>
<td>1 (7.14%)</td>
<td>1 (4%)</td>
</tr>
<tr>
<td>Length of stay (days)</td>
<td>Median [Min-Max]</td>
<td>0 [0-1]</td>
<td>1 [1-5]</td>
</tr>
<tr>
<td>EBL (mL)</td>
<td>Median [Min-Max]</td>
<td>25 [10-100]</td>
<td>100 [50-100]</td>
</tr>
<tr>
<td>Uterine weight (g)</td>
<td>Median [Min-Max]</td>
<td>N/A</td>
<td>102 [42-215]</td>
</tr>
<tr>
<td>Uterine manipulator</td>
<td>7 (64%)</td>
<td>14 (100%)</td>
<td>21 (84%)</td>
</tr>
<tr>
<td>Postoperative complications</td>
<td>0 (0%)</td>
<td>1 (7%)</td>
<td>1 (4%)</td>
</tr>
<tr>
<td>Transfusion</td>
<td>0 (0%)</td>
<td>1 (7%)</td>
<td>1 (4%)</td>
</tr>
</tbody>
</table>

Table 2: Baseline demographics

<table>
<thead>
<tr>
<th>Type of procedure</th>
<th>Adnexal cases (n=11)</th>
<th>Hysterectomies (n=14)</th>
<th>All completed cases (n=25)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ovarian cystectomy</td>
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</tr>
<tr>
<td>SCH +/- BSO</td>
<td>0</td>
<td>3 (21.43%)</td>
<td>3 (12%)</td>
</tr>
<tr>
<td>TH = BSO + LND</td>
<td>0</td>
<td>1 (7.14%)</td>
<td>1 (4%)</td>
</tr>
<tr>
<td>Length of stay (days)</td>
<td>Median [Min-Max]</td>
<td>0 [0-1]</td>
<td>1 [1-5]</td>
</tr>
<tr>
<td>EBL (mL)</td>
<td>Median [Min-Max]</td>
<td>25 [10-100]</td>
<td>100 [50-100]</td>
</tr>
<tr>
<td>Uterine weight (g)</td>
<td>Median [Min-Max]</td>
<td>N/A</td>
<td>102 [42-215]</td>
</tr>
<tr>
<td>Uterine manipulator</td>
<td>7 (64%)</td>
<td>14 (100%)</td>
<td>21 (84%)</td>
</tr>
<tr>
<td>Postoperative complications</td>
<td>0 (0%)</td>
<td>1 (7%)</td>
<td>1 (4%)</td>
</tr>
<tr>
<td>Transfusion</td>
<td>0 (0%)</td>
<td>1 (7%)</td>
<td>1 (4%)</td>
</tr>
</tbody>
</table>

Table 3: Surgical outcome
Table 4: Operative metrics

<table>
<thead>
<tr>
<th>Time (min)</th>
<th>Adnexal N = 11</th>
<th>Hysterectomy N = 14</th>
<th>All completed cases N = 25</th>
</tr>
</thead>
</table>

Table 5: Learning curve

* Linear regression analysis

<table>
<thead>
<tr>
<th>Time (min)</th>
<th>Intercept</th>
<th>Slope</th>
<th>P-value testing if slope = 0</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preparation Time</td>
<td>32.55</td>
<td>-0.28</td>
<td>0.15</td>
</tr>
<tr>
<td>Port Placement Time</td>
<td>4.07</td>
<td>0.04</td>
<td>0.46</td>
</tr>
<tr>
<td>Docking Time</td>
<td>8.79</td>
<td>-0.15</td>
<td>0.12</td>
</tr>
<tr>
<td>Preconsole Time</td>
<td>17.20</td>
<td>-0.13</td>
<td>0.33</td>
</tr>
<tr>
<td>Console Time</td>
<td>42.36</td>
<td>-0.66</td>
<td>0.20</td>
</tr>
<tr>
<td>Operating Time</td>
<td>26.76</td>
<td>-1.13</td>
<td>0.05</td>
</tr>
<tr>
<td>Room Time</td>
<td>57.31</td>
<td>-1.71</td>
<td>0.16</td>
</tr>
</tbody>
</table>

Findings

- No statistically significant difference between completed and incomplete cases as far as age (p=0.29), BMI (p=0.38), maximal adnexal diameter (p=0.95), uterine weight (p=0.84), EBL (p=0.07), LOS (p=0.46), Room time (p=0.46)
- No significant association was found between BMI and console times in adnexal (p=0.72) or hysterectomy cases (p=0.46)
- No significant association was found between history of prior abdominopelvic surgeries and console times in adnexal (p=0.72) or hysterectomy cases (p=0.46)
- No significant association between uterine weight and console time in hysterectomy cases (p=0.80)
- Satisfying cosmetic outcome
Conclusion

- Robotic Single-Site Surgery appears feasible and safe when performed by an experienced surgeon.
- ... However, we recognize several challenges.
- Careful case selection and meticulous surgical technique are mandatory to optimize patient outcomes.
- Appropriate patient counseling including need for conversion to a different minimally invasive approach.
- Rapid learning curve when performed by experienced surgeons.

References

CULTURAL AND LINGUISTIC COMPETENCY

Governor Arnold Schwarzenegger signed into law AB 1195 (eff. 7/1/06) requiring local CME providers, such as the AAGL, to assist in enhancing the cultural and linguistic competency of California’s physicians (researchers and doctors without patient contact are exempt). This mandate follows the federal Civil Rights Act of 1964, Executive Order 13166 (2000) and the Dymally-Alatorre Bilingual Services Act (1973), all of which recognize, as confirmed by the US Census Bureau, that substantial numbers of patients possess limited English proficiency (LEP).

California Business & Professions Code §2190.1(c)(3) requires a review and explanation of the laws identified above so as to fulfill AAGL’s obligations pursuant to California law. Additional guidance is provided by the Institute for Medical Quality at http://www.imq.org

Title VI of the Civil Rights Act of 1964 prohibits recipients of federal financial assistance from discriminating against or otherwise excluding individuals on the basis of race, color, or national origin in any of their activities. In 1974, the US Supreme Court recognized LEP individuals as potential victims of national origin discrimination. In all situations, federal agencies are required to assess the number or proportion of LEP individuals in the eligible service population, the frequency with which they come into contact with the program, the importance of the services, and the resources available to the recipient, including the mix of oral and written language services. Additional details may be found in the Department of Justice Policy Guidance Document: Enforcement of Title VI of the Civil Rights Act of 1964 http://www.usdoj.gov/crt/cor/pubs.htm.

Executive Order 13166, “Improving Access to Services for Persons with Limited English Proficiency”, signed by the President on August 11, 2000 http://www.usdoj.gov/crt/cor/13166.htm was the genesis of the Guidance Document mentioned above. The Executive Order requires all federal agencies, including those which provide federal financial assistance, to examine the services they provide, identify any need for services to LEP individuals, and develop and implement a system to provide those services so LEP persons can have meaningful access.

Dymally-Alatorre Bilingual Services Act (California Government Code §7290 et seq.) requires every California state agency which either provides information to, or has contact with, the public to provide bilingual interpreters as well as translated materials explaining those services whenever the local agency serves LEP members of a group whose numbers exceed 5% of the general population.

If you add staff to assist with LEP patients, confirm their translation skills, not just their language skills. A 2007 Northern California study from Sutter Health confirmed that being bilingual does not guarantee competence as a medical interpreter. http://www.pubmedcentral.nih.gov/articlerender.fcgi?artid=2078538.