Plenary 1 - Laparoscopy

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Professional Education Information

Target Audience
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Plenary 1 - Laparoscopy

Moderators: Jon K. Hathaway, Ertan Saridogan, Stephen E. Zimberg

Faculty: Sawsan As-Sanie, Charles J. Ascher-Walsh, Amanda M. Ecker, Katherine A. Hartzell, Kevin J.E. Stepp, Brooke Winner

This session focuses on Multiple Retrospective Reviews of Laparoscopic Supracervical Hysterectomy and Laparoscopic Myomectomy using power morcellation; and the incidence and characteristics of unanticipated neoplasms. Additionally, studies retaliated to advanced laparoscopic training, including laparoscopic single site, and novel laparoscopic techniques are presented.

Learning Objectives: At the conclusion of this course, the participant will be able to: 1) Review laparoscopic techniques to enhance the clinician’s surgical armamentarium.

Course Outline

11:00 Morcellated Uterine Pathology in 815 Consecutive Patients at a Single Academic Institution C.J. Ascher-Walsh
11:10 Laparoscopic Management of an Advanced Interstitial Pregnancy A.M. Ecker
11:16 Unexpected Uterine Sarcoma and Other Gynecologic Malignancies Diagnosed after Hysterectomy Performed for Benign Indications S. As-Sanie
11:26 An AAGL Task Force Consensus Statement: A Standardized Approach to LESS Hysterectomy K.J.E. Stepp
11:33 Pelvic Spindle Cell Neoplasms Following Laparoscopic Hysterectomy or Myomectomy with Power Morcellation K.A. Hartzell
11:43 A Novel Surgical Proctoring Model for Minimally Invasive Gynecology: Effect on Rate of Abdominal Hysterectomy and Outcomes at a Community Hospital B. Winner
12:00 Adjourn
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Amanda M. Ecker*
Katherine A. Hartzell*
Jon Hathaway*
Ertan Saridogan
Other: Honoraria for Provision of Training: Ethicon Women’s Health & Urology, Gedeon Richter
Kevin J.E. Stepp
Consultant: CONMED Corporation, Teleflex
Other: Stock Ownership: Titan Medical
Brooke Winner*
Stephen Zimberg
Other: THL Course Teacher: Covidien

Asterisk (*) denotes no financial relationships to disclose.
Morcellated Uterine Pathology in 815 Consecutive Patients at a Single Academic Institution

C Ascher-Walsh

Disclosures

- I have no financial relationships to disclose

Learning Objectives

- At the conclusion of this activity, participants will be better able to understand the risk of abnormal uterine pathology in morcellated uterus/fibroid specimen.

Background

- Uterine leiomyomas (fibroids) are prevalent in up to 80% of women, almost a quarter with significant symptoms.1-4
- Many women with fibroids desire minimally invasive surgical treatments that require intra-abdominal morcellation of the specimen.
- While this surgical technique has been in use for almost 2 decades, recent controversy over the risks related to spread of unrecognized cancer have brought its use under question.
- The incidence of cancer in these specimens have been estimated to be between 1 in 350 to 1000.
- This study represents one individual’s case serious of 815 sequential procedures with the use of this devise to provide more information to better understand the risk of occult cancer.

Design

- Retrospective chart review

Setting

- University Based Hospital
Patients

- 825 consecutive patients undergoing laparoscopic supra-cervical hysterectomy or laparoscopic myomectomies from 6/06 through 7/13 performed by the same surgeon.

Interventions

- Laparoscopic supra-cervical hysterectomy or laparoscopic myomectomy with specimen removed by power morcellation. Means and standard deviations calculated with SPSS software package.

Measurements & Main Results

- 394 cases were laparoscopic supracervical hysterectomies and 431 cases were laparoscopic myomectomies.

<table>
<thead>
<tr>
<th>Demographics</th>
<th>Lapx myomectomy</th>
<th>Lapx SCH</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean Age</td>
<td>40.45 (11.95)</td>
<td>47.61 (7.84)</td>
<td>46.54 (10.14)</td>
</tr>
<tr>
<td>Mean Parity</td>
<td>0.22 (0.58)</td>
<td>1.55 (1.62)</td>
<td>0.96 (1.36)</td>
</tr>
<tr>
<td>Mean BMI</td>
<td>24.67 (5.36)</td>
<td>27.70 (6.49)</td>
<td>26.67 (6.02)</td>
</tr>
<tr>
<td>Mean Pre-op uterine size in weeks</td>
<td>13.56 (3.29)</td>
<td>13.97 (5.05)</td>
<td>13.76 (4.01)</td>
</tr>
<tr>
<td>Mean Mass of the specimen in grams</td>
<td>318.96 (302.57)</td>
<td>NA</td>
<td>318.96 (302.57)</td>
</tr>
<tr>
<td>Mean Number of myomas</td>
<td>3.38 (3.04)</td>
<td>NA</td>
<td>3.38 (3.04)</td>
</tr>
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</table>

Measurements & Main Results

<table>
<thead>
<tr>
<th>Pathology</th>
<th>Lapx myomectomy</th>
<th>Lapx SCH</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Myoma</td>
<td>316</td>
<td>208</td>
<td>524</td>
</tr>
<tr>
<td>Adenomyosis</td>
<td>5</td>
<td>26</td>
<td>31</td>
</tr>
<tr>
<td>Myoma &amp; Adenomyosis</td>
<td>4</td>
<td>96</td>
<td>100</td>
</tr>
<tr>
<td>Myoma with degeneration</td>
<td>95</td>
<td>31</td>
<td>126</td>
</tr>
<tr>
<td>Myoma with degeneration &amp; Adenomyosis</td>
<td>0</td>
<td>7</td>
<td>7</td>
</tr>
<tr>
<td>Normal</td>
<td>0</td>
<td>18</td>
<td>18</td>
</tr>
<tr>
<td>Atypical endometrial hyperplasia</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Endometrial carcinoma</td>
<td>0</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Atypical myoma</td>
<td>11</td>
<td>5</td>
<td>16</td>
</tr>
</tbody>
</table>

Conclusion

- The majority of the cases in this series (99.75%) were benign. The incidence of endometrial cancer in this population was 0.25%.
- Uterine sarcomas are very rare and none were found in the series of 815 consecutive patients undergoing power morcellation.

References

References


Laparoscopic Management of an Advanced Interstitial Pregnancy

Amanda M. Ecker, M.D.
Magee-Womens Hospital of UPMC, Pittsburgh, Pennsylvania

Objective: To show how advanced interstitial pregnancy can be safely managed with a laparoscopic resection.

Design: Stepwise demonstration of the technique with narrated video footage.

Setting: Interstitial pregnancy is one of the more uncommon forms of ectopic pregnancy, representing only 2-4% of all ectopics. However, with a mortality rate up to 2.5%, it carries a rate seven times higher than that of other types of ectopic pregnancies. Interstitial pregnancies, when encountered, typically are not as advanced as in this instance (11w2d). Despite extremely thin overlying myometrium that ruptured during resection, with appropriate surgical technique, even this advanced interstitial pregnancy was able to be safely managed laparoscopically.

Interventions: Total laparoscopic approach to an advanced interstitial pregnancy with several key strategies to minimize blood loss:

1. Development of the retroperitoneal spaces with temporary uterine artery ligation
2. Temporary contralateral utero-ovarian ligation
3. Injection of vasopressin at the junction between uterus and gestational sac
4. Use of Enseal device to enucleate the gestational sac

Conclusion: Historically, interstitial pregnancies have been managed with laparotomy. Here, we demonstrate several strategies to maintain laparoscopic visibility by minimizing blood loss to safely perform resection of even an advanced interstitial pregnancy safely and effectively.
OCCULT UTERINE SARCOMA AND OTHER GYNECOLOGIC MALIGNANCIES DIAGNOSED AFTER Hysterectomy PERFORMED FOR BENIGN INDICATIONS

Sawsan As-Sanie MD, MPH
University of Michigan Health System
November 19th 2014

Learning Objectives
- Recognize the incidence of occult uterine sarcoma and other gynecologic malignancies among women undergoing surgery for benign indications
- Identify risk factors for patients with occult gynecologic malignancy
- Implement accurate preoperative patient counseling regarding the risk of occult malignancy

Background
- Benefits of minimally invasive gynecologic surgery
  - Quicker recovery
  - Fewer perioperative complications
- Most common indication for hysterectomy is fibroids
- Unclear incidence of occult gynecologic malignancy
  - Uterine sarcoma: 0.09 to 0.7%
  - Endometrial cancer: 0.13 to 0.4%

Study Objectives
- Establish the incidence of occult uterine sarcoma and other gynecologic malignancies among women undergoing hysterectomy for benign indications
- Identify risk factors associated with the diagnosis of occult gynecologic malignancy

Methods
- Retrospective chart review
- Statewide Michigan all-payer quality and safety surgical database
  - Michigan Surgical Quality Collaborative (MSQC)
- January 1, 2012 to December 8, 2013

Disclosure
I have no financial relationships to disclose.
Participants

- Hysterectomy performed for benign indications (n=6,369)
  - Family history of cancer, pelvic mass, hyperplasia without atypia, prolapse, endometriosis, pelvic pain, fibroids, abnormal uterine bleeding
  - Excluded indications for cancer or high suspicion for cancer (n=1,100)
    - Cancer, hyperplasia with atypia, cervical dysplasia

Results

- Overall incidence of occult gynecologic malignancy: 2.72% (n=173)
  - Uterine Sarcoma
  - Endometrial Cancer
  - Cervical Cancer
  - Ovarian/fallopian tube/peritoneal Cancer
  - Metastatic Cancer

<table>
<thead>
<tr>
<th>Incidence n (%)</th>
<th>Uterine Sarcoma</th>
<th>Endometrial Cancer</th>
<th>Cervical Cancer</th>
<th>Ovarian/fallopian tube/peritoneal Cancer</th>
<th>Metastatic Cancer</th>
</tr>
</thead>
<tbody>
<tr>
<td>14 (0.22)</td>
<td>65 (1.02)</td>
<td>11 (0.17)</td>
<td>69 (1.08)</td>
<td>13 (0.20)</td>
<td></td>
</tr>
</tbody>
</table>

Figure 1. The incidence of occult gynecologic malignancy based on preoperative surgical indication

The incidence of uterine sarcoma based on indication and age

Perioperative characteristics of women undergoing hysterectomy for benign indications

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Benign (n=166)</th>
<th>All cases of uterine sarcoma (n=24)</th>
<th>p value</th>
<th>Occult uterine sarcoma (n=14)</th>
<th>p value</th>
<th>Occult gynecologic malignancy (n=116)</th>
<th>p value</th>
<th>Occult gynecologic malignancy (n=21)</th>
<th>p value</th>
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</thead>
<tbody>
<tr>
<td>Age (y)</td>
<td>49.97 ± 10.77</td>
<td>54 ± 13.60</td>
<td>0.002</td>
<td>46.92 ± 13.60</td>
<td>0.97</td>
<td>58.30 ± 12.10</td>
<td>0.0001</td>
<td>87.50 ± 12.10</td>
<td>0.0001</td>
</tr>
<tr>
<td>Parity</td>
<td>2.06 ± 1.42</td>
<td>2.09 ± 1.35</td>
<td>0.83</td>
<td>2.04 ± 1.33</td>
<td>0.23</td>
<td>1.96 ± 1.76</td>
<td>0.001</td>
<td>1.89 ± 1.76</td>
<td>0.10</td>
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<tr>
<td>Ethnicity</td>
<td>Hispanic</td>
<td>109 (1.8)</td>
<td>0.67</td>
<td>0</td>
<td>0.49</td>
<td>3 (0.21)</td>
<td>0.49</td>
<td>14 (1.07)</td>
<td>0.49</td>
</tr>
<tr>
<td></td>
<td>Non-Hispanic</td>
<td>5628 (90.8)</td>
<td>14 (100)</td>
<td>103 (75.9)</td>
<td>10 (66.6)</td>
<td>214 (16.2)</td>
<td>10 (66.6)</td>
<td>14 (1.07)</td>
<td>0.49</td>
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<tr>
<td></td>
<td>Unknown</td>
<td>449 (7.4)</td>
<td>0</td>
<td>0</td>
<td>0.49</td>
<td>14 (1.07)</td>
<td>0.49</td>
<td>14 (1.07)</td>
<td>0.49</td>
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<tr>
<td>Race</td>
<td>White</td>
<td>4093 (75.30)</td>
<td>15 (100)</td>
<td>103 (75.9)</td>
<td>10 (66.6)</td>
<td>214 (16.2)</td>
<td>10 (66.6)</td>
<td>14 (1.07)</td>
<td>0.49</td>
</tr>
<tr>
<td></td>
<td>Black</td>
<td>1097 (17.70)</td>
<td>7 (50.0)</td>
<td>103 (75.9)</td>
<td>10 (66.6)</td>
<td>14 (1.07)</td>
<td>0.49</td>
<td>14 (1.07)</td>
<td>0.49</td>
</tr>
<tr>
<td></td>
<td>American Indian &amp; Alaskan native</td>
<td>21 (3.4)</td>
<td>D</td>
<td>0.07</td>
<td>0.85</td>
<td>0.02</td>
<td>0.02</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Asian</td>
<td>60 (9.7)</td>
<td>D</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Other</td>
<td>349 (5.63)</td>
<td>2 (8.33)</td>
<td>1 (7.14)</td>
<td>10 (66.6)</td>
<td>0</td>
<td>0</td>
<td>0</td>
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<tr>
<td>Insurance type</td>
<td>Non-private</td>
<td>1045 (26.7)</td>
<td>10 (41.7)</td>
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<td>0.42</td>
<td>0.17</td>
<td>0.45</td>
<td>0.001</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Private</td>
<td>4356 (73.30)</td>
<td>14 (32.0)</td>
<td>8 (32.7)</td>
<td>0.43</td>
<td>32 (32.9)</td>
<td>0.47</td>
<td>0.001</td>
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<tr>
<td>BMI (kg/m2)</td>
<td>30.59 ± 7.50</td>
<td>32.03 ± 7.56</td>
<td>0.35</td>
<td>32.19 ± 7.67</td>
<td>0.43</td>
<td>32.93 ± 9.47</td>
<td>0.001</td>
<td>32.93 ± 9.47</td>
<td>0.001</td>
</tr>
</tbody>
</table>
Preoperative indication sub-analysis

- Surgical indication: Pelvic mass and family history of cancer excluded (n=5,202)
  - Overall incidence of gynecologic malignancy: 1.61% (n=84)
  - Uterine sarcoma: 0.23% (n=12)
  - Endometrial cancer: 0.96% (n=50)
  - Cervical cancer: 0.19% (n=10)
  - Ovarian/peritoneal/fallopian cancer: 0.17% (n=9)
  - Metastatic cancer: 0.06% (n=3)

Conclusion

- Low incidence of occult gynecologic cancer
  - Uterine sarcoma: 1 in 455
  - Endometrial cancer: 1 in 98
  - Cervical cancer: 1 in 579
- Conduct comprehensive preoperative evaluation prior to benign hysterectomy
- Implement complete preoperative surgical counseling
  - Risk of occult cancer and morcellation
  - Benefits of laparoscopy versus open procedure

STRENGTHS

- Large and diverse database
- Robust and detailed data
- High quality data collection

LIMITATIONS

- Limited data on preoperative imaging, cervical cancer screening and endometrial biopsy
- No differentiation among sarcoma subgroups

References

An AAGL Task Force Consensus Statement: A Standardized Approach to LESS Hysterectomy

Kevin J. E. Stepp, MD
Carolinas Healthcare System, Charlotte, North Carolina

Objective: Describe a laparoendoscopic single site (LESS) hysterectomy approach that gynecologic surgeons can follow for quicker mastery of the technique.

Design: Consensus Statement

Design Classification: Canadian Task Force Type III

Setting: AAGL Sponsored Task Force on LESS Hysterectomy

Patients: N/A

Interventions: Expert discussion

Measurements and Main Results: Leading LESS surgeons and educators from around the world convened to develop a standardized approach to LESS laparoscopic hysterectomy to facilitate adoption in a safe, effective manner. LESS hysterectomy can be described in 10 basic steps. Laparoscopic suturing is the most complicated task to perform with LESS.

Conclusion: A standardized approach to LESS hysterectomy is presented. This technique minimizes instrument exchanges, external and internal clashing, and enhances efficiency.
Pelvic Spindle Cell Neoplasms Following Laparoscopic Hysterectomy with Power Morcellation

Katherine Hartzell MD
Department of Obstetrics and Gynecology
Kaiser Permanente San Diego

Disclosures
I have no financial relationships to disclose.

Background
- 600,000 laparoscopic hysterectomies annually, 40% laparoscopic
- Fewer complications, less blood loss, less pain, faster recovery
- Power morcellation used when specimen too large to fit through the vaginal canal
- Recent concern for dissemination of benign or malignant tissue

Spindle Cell Neoplasms
- Tumors of the uterine smooth muscle or endometrial stroma
- Parasitic Fibroids
- Uterine sarcomas
  - Leiomyosarcoma
  - Endometrial stromal sarcoma
  - Carcinosarcoma
  - Undifferentiated uterine sarcoma

Objectives
To describe rates of spindle cell neoplasm formation after power morcellation
To identify risk factors for spindle cell neoplasm formation at the time of laparoscopic hysterectomy with power morcellation

Methods
- Retrospective chart review
- All laparoscopic hysterectomies at Kaiser Permanente San Diego from 2001 to 2012
- Patients identified with parasitic fibroids or uterine sarcoma
**Methods**

- Univariate Analyses
- Fisher exact test
- Mann Whitney U
- Multivariate Analysis (p<0.1 or biologically plausible)

<table>
<thead>
<tr>
<th>Age</th>
<th>BMI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethnicity</td>
<td>Smoking</td>
</tr>
<tr>
<td>menopause</td>
<td>use of hormones</td>
</tr>
<tr>
<td>diabetes</td>
<td>collagen disease</td>
</tr>
<tr>
<td>alcohol</td>
<td>uterine weight</td>
</tr>
<tr>
<td>Lupron</td>
<td>vaginai/dedle</td>
</tr>
<tr>
<td># hysterectomy</td>
<td>prior pelvic surgery</td>
</tr>
<tr>
<td>fibroids</td>
<td>outcomes-removed</td>
</tr>
<tr>
<td>malignancy</td>
<td>adenosarcoma</td>
</tr>
<tr>
<td>endometriosis</td>
<td>converted to laparotomy</td>
</tr>
<tr>
<td>adenomyosis</td>
<td>PK for vessels</td>
</tr>
<tr>
<td>DL</td>
<td>harmonic for amputation</td>
</tr>
</tbody>
</table>

**Results**

- 3523 laparoscopic hysterectomies
- 941 underwent power morcellation
- 10 women diagnosed with spindle cell neoplasms: 10/941 = 1.1%

**Results - Parasitic Fibroids**

- 4/941 = 0.4%
- Time to presentation: 5 years (4-11 years)
- Presenting symptoms: palpable mass, pain, asymptomatic

<table>
<thead>
<tr>
<th>Effect</th>
<th>Odds Ratio</th>
<th>Confidence Interval</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age &lt;40 yrs</td>
<td>26</td>
<td>2.7-262</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>Uterine weight &gt;350g</td>
<td>7</td>
<td>0.7-69.4</td>
<td>0.098</td>
</tr>
</tbody>
</table>

**Results - Uterine Sarcoma**

- All sarcomas: 6/941 = 0.6%
- Median age = 46 years; median uterine weight = 386 grams
- 3 endometrial stromal sarcoma
- 3 leiomyosarcoma (2 low-grade, 1 high-grade)
- 3 diagnosed on initial Pathology
- 3 without sarcoma on initial Pathology
- No significant associations between potential risk factors and uterine sarcoma

**Results - Uterine Sarcoma With Initially Benign Pathology**

- Incidence: 3/941 = 0.3%
- Median age = 45 years; median uterine weight = 486 grams
- Time to presentation: 6 years (2-7 years)
- 1 endometrial stromal sarcoma, 2 leiomyosarcoma (1 low-grade, 1 high grade)
- No significant associations with risk factors

**Uterine sarcoma in patients who did not undergo morcellation**

- 3523 laparoscopic hysterectomies
- 2582 did not undergo power morcellation
- Uterine sarcoma: 5/2582 = 0.2%
- 2 low-grade endometrial stromal sarcoma, 1 carcinosarcoma, 2 leiomyosarcoma (1 high grade, 1 grade not specified)
Discussion - Incidence

- Incidence of uterine sarcoma
- FDA analysis
  - Uterine sarcoma: 0.28% (1/352)
  - Leiomyosarcoma: 0.20% (1/498)
- ACOG analysis
  - Uterine sarcoma: 0.2%
- Our study
  - Uterine sarcoma: 0.6%
  - Leiomyosarcoma: 0.3%

Discussion - Outcomes

- Our study
  - 6 sarcomas in 941 patients with morcellation
  - 5/6 patients disease free at 31 months follow up
  - 1 patient with HGUMS, passed after 3 years
  - 5 sarcomas in 2582 patients without morcellation
  - 1 patient with HGUMS, passed after 2 years
- FDA analysis
  - 3 of 9 studies include morcellation, 2 specify number:
  - 5 sarcomas in 1596 patients with morcellation
  - All 5 patients alive with no disease at publication

Strengths

- Large cohort of patients
- 11 year study period
- Captive HMO

Limitations

- Small number of cases
- Does not include non-power morcellation, or myomectomy

Conclusions

- Patients should be counseled about the possibility of morcellation of an undiagnosed malignancy
- Offered alternatives to morcellation
- Uterine sarcoma is rare, risk of morcellation of occult malignancy not sufficient to abandon morcellation completely

References

2. ACOG - Power Morcellation and Occult Malignancy in Gynecologic Surgery: A Special Report [Internet]. [cited 2014 May 26].
3. ACOG - Power Morcellation and Occult Malignancy in Gynecologic Surgery: A Special Report [Internet]. [cited 2014 May 26].
5. ACOG - Power Morcellation and Occult Malignancy in Gynecologic Surgery: A Special Report [Internet]. [cited 2014 May 26].
A Novel Surgical Proctoring Model for Minimally Invasive Gynecology

Effect on rate of abdominal hysterectomy and outcomes at a community hospital

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- DISCLOSURE -

- I have no financial relationships to disclose

- LEARNING OBJECTIVES -

- Understand the structure of this novel surgical proctoring model
- Describe the proctoring model’s effect on mode of hysterectomy
- Describe the proctoring model’s effect on outcomes of laparoscopic hysterectomy

- BACKGROUND -

- Advantages of minimally invasive hysterectomy established 1-3
- Abdominal hysterectomy rates decreasing, but still work to do 4
- Barriers to minimally invasive hysterectomy include lack of training, technical difficulty of the procedure, and low surgical volume 5,6

Missouri Baptist developed a unique surgical proctoring program in an effort to decrease abdominal hysterectomy rates and improve outcomes

- High-volume MIGS specialist to assist general OB/GYNs in laparoscopic hysterectomies
- Proctor (also preceptor) paid by the hospital 7

- BACKGROUND -

- No prior studies describing a similar formal proctoring program
- Prior studies show adding an MIGS division can increase MIGS rates 8
- Prior studies show unclear effect of surgeon volume in gynecologic surgery 9-13
RESEARCH QUESTIONS:
Does the proctoring program:
1. decrease abdominal hysterectomy rates?
2. improve laparoscopic hysterectomy outcomes?

OBJECTIVE

METHODS

IRB approved retrospective cohort study
Hospital billing data and ICD-9 codes
Hysterectomy for benign disease from 1/1/2010 to 12/31/2013

METHODS

OBJECTIVE

METHODS

OUTCOME

METHODS

OUTCOME

STATS

RESULTS

Hysterectomy Rate by Route of Surgery

POWER calculation: 134 patients needed in each group

Mode of hysterectomy analysis
• Rate of abdominal, laparoscopic, vaginal and robotic tracked
• Rate of abdominal hysterectomy at end versus beginning of study period compared

Outcomes of laparoscopic hysterectomy analysis:
• Laparoscopic hysterectomies performed with and without a proctor compared
• Inclusion criteria: total laparoscopic or supracervical ± adnexa
• Exclusion criteria: LAVH, concomitant procedures, cancer
• Primary outcome: operative time
• Secondary outcomes: intraoperative organ injury, conversion to open, blood loss, intraoperative consult, length of stay, readmission, and reoperation

Mode of hysterectomy analysis
• Relative risk of abdominal hysterectomy

Outcomes of laparoscopic hysterectomy analysis
• Multivariate linear model used to control for differences between groups

50% reduced risk of abdominal hysterectomy
RR 0.51, CI 0.40-0.68
**Baseline Demographic and Clinical Characteristics**

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Proctored N (%)</th>
<th>Non-Proctored N (%)</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Race</td>
<td>212 (81.7)</td>
<td>179 (70.4)</td>
<td>&lt;0.001</td>
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<tr>
<td>Education</td>
<td>212 (81.7)</td>
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<tr>
<td>Non-Caucasian</td>
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<tr>
<td>Insurance (Private)</td>
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<td>&lt;0.001</td>
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<tr>
<td>BMI</td>
<td>212 (81.7)</td>
<td>179 (70.4)</td>
<td>&lt;0.001</td>
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<tr>
<td>Medical co-morbidities</td>
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<td>Cardiovascular Disease</td>
<td>76 (35.8)</td>
<td>44 (15.5)</td>
<td>&lt;0.001</td>
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<tr>
<td>Diabetes Mellitus</td>
<td>71 (33.5)</td>
<td>41 (14.8)</td>
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<tr>
<td>Pulmonary Disease</td>
<td>39 (18.4)</td>
<td>28 (10.1)</td>
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<tr>
<td>Smoker</td>
<td>75 (35.3)</td>
<td>53 (20.1)</td>
<td>&lt;0.001</td>
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</table>

**Primary Outcome: Operative Time**

<table>
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<th>Characteristics</th>
<th>t(SE)</th>
<th>LL</th>
<th>UL</th>
<th>p value</th>
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<td>Proctored Surgery</td>
<td>-42.61 (4.73)</td>
<td>-51.88</td>
<td>-33.34</td>
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<td>Primary Procedure</td>
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<td>LH to TAH</td>
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<td>&lt;0.011</td>
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<td>LSH</td>
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<tr>
<td>TAH</td>
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<td></td>
<td>&lt;0.001</td>
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<tr>
<td>Cystoscopy</td>
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<td>&lt;0.001</td>
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<tr>
<td>BMI</td>
<td>0.69 (0.25)</td>
<td>0.19</td>
<td>1.18</td>
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<td>Belong to Teaching Program</td>
<td>0.02</td>
<td>0.00</td>
<td>0.04</td>
<td>0.001</td>
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</table>

**DISCUSSION**

- Abdominal hysterectomy rates significantly below national average.
- Magnitude of improved outcomes greater than previously demonstrated.
- Novel proctoring model includes teaching, unlike prior comparisons.
**DISCUSSION**

**Strengths**
- Novel program
- Large number of patients
- Several years follow-up
- Outcomes collected directly from medical record and analyzed separately
- Community hospital

**Limitations**
- Retrospective
- Single institution
- Effectiveness depends on skill of proctor
- Only outcomes of laparoscopic hysterectomy examined

**CONCLUSIONS**

Surgical proctoring program:
- Abdominal hysterectomy decreased
- Laparoscopic hysterectomy increased
- Improved outcomes
- Faster operative times
- Decreased ureter and organ injury
- Fewer conversions to open
- Shorter length of stay

**REFERENCES**

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](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](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](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.

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