



Figure 2. Receiver operating characteristic (ROC) curves for individual attribute groups (A-G) and composite model (H). AUC: area under the ROC curve.

Attribute group	AUC, attribute group (95% CI)	AUC, composite model with attribute group removed (95% CI)	p-value, AUC of composite model vs. AUC of composite model with attribute group removed
Intraoperative attributes	0.715 (0.707-0.722)	0.719 (0.711-0.726)	<0.001
Surgeon attributes	0.678 (0.670-0.685)	0.771 (0.765-0.778)	<0.001
Hospital attributes	0.659 (0.650-0.667)	0.771 (0.765-0.778)	<0.001
Patient clinical attributes	0.581 (0.575-0.591)	0.771 (0.764-0.778)	<0.001
Surgical timing attributes	0.563 (0.555-0.571)	0.769 (0.762-0.776)	<0.001
Patient socioeconomic attributes	0.551 (0.543-0.558)	0.775 (0.769-0.781)	0.002
Patient geographic attributes	0.535 (0.526-0.544)	0.777 (0.770-0.784)	0.671

**DISCLOSURE OF RELEVANT FINANCIAL RELATIONSHIPS:**

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**11 Quality of life and symptoms following laparoscopic Essure removal: a prospective multicenter study**



N. Clark<sup>1</sup>, W. T. Ross<sup>2</sup>, C. Arvizo<sup>3</sup>, C. M. Helou<sup>4</sup>, P. Maghsoudlou<sup>5</sup>, C. Stetter<sup>6</sup>, A. Kunselman<sup>6</sup>, T. Deimling<sup>6</sup>, A. Yunker<sup>7</sup>, M. Ajao<sup>5</sup>, S. L. Raissier<sup>8</sup>, J. Einarsson<sup>5</sup>

<sup>1</sup>Massachusetts General Hospital, Boston, MA, <sup>2</sup>Washington University School of Medicine, St. Louis, MO, <sup>3</sup>Jacobi Medical Center, New York, NY, <sup>4</sup>Greater Baltimore Medical Center, Baltimore, MD, <sup>5</sup>Brigham and Women's Hospital, Boston, MA, <sup>6</sup>Penn State Health Milton S. Hershey Medical Center, Hershey, PA, <sup>7</sup>Vanderbilt University Medical Center, Nashville, TN, <sup>8</sup>Mayo Clinic Rochester, Rochester, MN

**OBJECTIVES:** The objective of this study was to compare quality of life and symptoms before and after Essure removal.

**MATERIALS AND METHODS:** This multicenter, prospective study evaluated patient-reported quality of life and symptoms before and 4 months after laparoscopic Essure removal for device-attributed symptoms. Quality of life was measured using the validated Short Form-8 questionnaire for health-related quality of life. Symptoms were measured using a study-specific questionnaire.

**RESULTS:** Essure removal was performed on 80 patients with device-attributed symptoms at 4 institutions between 2018 and 2020. The majority (n=53, 66.3%) underwent a laparoscopic hysterectomy and bilateral salpingectomy, and the remainder (n=27, 33.8%) underwent a laparoscopic bilateral salpingectomy alone. Indications for device removal were pain (n=73, 91.3%) and abnormal bleeding (n=42, 52.5%), in addition to several other patient-reported symptoms. 51 (63.8%) patients completed the postoperative questionnaire. Quality of life was significantly improved following Essure removal as measured by the physical and mental component summary scores (Table 1). Almost all symptoms were less commonly reported after Essure removal (Table 1). Subgroup analyses of patients who underwent a hysterectomy or a salpingectomy alone also demonstrated a significantly improved quality of life after the procedure. Symptoms were more likely to resolve following hysterectomy and salpingectomy compared to salpingectomy alone. Most patients (n=47/51, 92.2%) were satisfied with the results of their surgery.

**CONCLUSION:** Patients undergoing laparoscopic Essure removal for device-attributed symptoms report improved quality of life and symptoms following the procedure. While the relationship between the Essure device and adverse symptoms remains unclear, Essure removal may benefit those experiencing adverse symptoms and is associated with high patient satisfaction.

Table 1

SF-8 Questionnaire	Preop	Postop	Postop vs. Preop	
	mean ± SD	mean ± SD	mean difference (95% CI)	p-value
Physical Component Summary (PCS) Score	38.9 ± 9.1	49.0 ± 9.6	9.9 (7.0,12.9)	<.001
Mental Component Summary (MCS) Score	33.9 ± 11.9	47.5 ± 10.3	13.8 (10.4,17.2)	<.001
Symptoms	n (%)	n (%)	odds ratio (95% CI)	p-value
Fatigue	71 (88.8%)	24 (47.1%)	0.11 (0.05,0.28)	<.001
Bloating	70 (87.5%)	12 (23.5%)	0.04 (0.02,0.11)	<.001
Pelvic Pain	69 (86.3%)	7 (13.7%)	0.02 (0.01,0.07)	<.001
Brain Fog	62 (77.5%)	15 (29.4%)	0.12 (0.05,0.27)	<.001
Headaches	59 (73.8%)	18 (35.3%)	0.18 (0.08,0.40)	<.001
Painful Periods	56 (70.0%)	4 (7.8%)	0.04 (0.01,0.12)	<.001
Heavy Vaginal Bleeding	53 (66.3%)	9 (17.6%)	0.11 (0.04,0.26)	<.001
Weight Gain	52 (65.0%)	12 (23.5%)	0.16 (0.07,0.37)	<.001
Irregular Periods	48 (60.0%)	3 (5.9%)	0.04 (0.01,0.14)	<.001
Constipation	46 (57.5%)	16 (31.4%)	0.33 (0.15,0.73)	0.007
Vaginal Discharge	45 (56.3%)	6 (11.8%)	0.10 (0.03,0.26)	<.001
Painful Sex	44 (55.0%)	5 (9.8%)	0.09 (0.03,0.25)	<.001
Hair Loss	44 (55.0%)	11 (21.6%)	0.22 (0.10,0.51)	<.001
Skin Changes	41 (51.3%)	7 (13.7%)	0.15 (0.06,0.38)	<.001

Abbreviated symptom list

**DISCLOSURE OF RELEVANT FINANCIAL RELATIONSHIPS:**

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## 12 Impact of pneumoperitoneum pressure during laparoscopic hysterectomy: a randomized controlled trial

R. B. Smith, E. A. Biller, C. Hu, N. Mahnert, A. Stone, S. Galhotra, J. Mourad

OB/GYN, Banner University Medical Center Phoenix, Phoenix, AZ

**OBJECTIVES:** Minimally invasive hysterectomy is a commonly performed gynecologic procedure with associated postoperative pain managed with opioid medications. Uncontrolled postoperative pain leads to increased opioid use/abuse, longer hospital stays, increase in healthcare visits, and may negatively affect patient satisfaction. Current data suggests that reduced pneumoperitoneum pressure during laparoscopic surgery may impact postoperative pain. Given the current opioid epidemic, surgeons are proactively finding ways to reduce postoperative pain. It is unclear how reduced pneumoperitoneum pressure impacts the surgeon. We investigated the impact of reduced pneumoperitoneum pressure on surgeon satisfaction.

**MATERIALS AND METHODS:** This was an IRB approved, double-blinded, randomized controlled trial from February 2020 to July 2021 comparing standard pneumoperitoneum pressure of 15mmHg to reduced pressures of 12mmHg and 10mmHg during laparoscopic hysterectomy. The primary outcome was surgeon satisfaction. Secondary outcomes included patient satisfaction, operative time, postoperative pain, opioid use, and discharge timing.

**RESULTS:** A total of 40 patients were randomized (13 – 15mmHg, 13 – 12mmHg, and 14 – 10mmHg). There were no differences in baseline demographics or perioperative characteristics. Surgeon satisfaction was negatively impacted with lower pneumoperitoneum pressures greatest with 10mmHg, including overall satisfaction ( $p=.01$ ), overall effect of the pneumoperitoneum ( $p=.04$ ), and quality of visualization ( $p=.01$ ). There was an apparent although not statistically significant difference in operative time ( $p=.06$ ). There was no difference in patient satisfaction, postoperative pain scores, opioid usage, or time to discharge.

**CONCLUSION:** Reduced pneumoperitoneum pressure during laparoscopic hysterectomy negatively impacted surgeon satisfaction with a trend towards longer operative times, and did not positively impact patient satisfaction, postoperative pain scores, opioid demand, or discharge timing.



Physician Satisfaction Questionnaire						
	0	1	2	3	4	5
<b>Quality of Visualization (VAS 0-5)</b> 0 = Poor; 5 = Optimal * must provide value	<input type="radio"/>					
<b>2. Effect of Pneumoperitoneum on Surgery (VAS 0-5)</b> 0 = Major negative effect; 5 = No Negative effect * must provide value	<input type="radio"/>					
<b>3. Surgeon Satisfaction of Pneumoperitoneum (Likert scale)</b> * must provide value	<input type="radio"/>					
<b>4. What pressure setting do you think was used during this surgery?</b>			<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
			<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
			<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
<b>5. Do you think increasing the pneumoperitoneum pressure would have improved your visualization?</b>				<input type="radio"/>	<input type="radio"/>	
				<input type="radio"/>	<input type="radio"/>	
<b>6. Do you think increasing the pneumoperitoneum pressure would have shortened your operative time?</b>				<input type="radio"/>	<input type="radio"/>	
				<input type="radio"/>	<input type="radio"/>	
<b>7. I am an attending, fellow, or resident</b> * must provide value				<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
				<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
				<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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## 13 Improved pain and quality of life after complete pelvic peritonectomy

M. Misal<sup>2</sup>, M. Girardo<sup>1</sup>, M. Wasson<sup>3</sup>

<sup>1</sup>Biostatistics, Mayo Clinic, Phoenix, AZ, <sup>2</sup>Obstetrics & Gynecology, Ohio State University Wexner Medical Center, Columbus, OH, <sup>3</sup>Medical and Surgical Gynecology, Mayo Clinic Arizona, Phoenix, AZ

**OBJECTIVES:** Surgical management of endometriosis reduces pain and improves quality of life, though debate continues regarding optimal technique. We evaluated the impact of complete pelvic peritonectomy (excision of anterior and posterior cul-de-sac peritoneum) for women with chronic pelvic pain (CPP).

**MATERIALS AND METHODS:** This was a prospective cohort study of women who underwent complete pelvic peritonectomy from 11/2019 - 11/2020 at a tertiary academic center. Women completed the Endometriosis Health Profile-30 (EHP-30) and Visual Analog Scale (VAS) pain scores assessment preoperatively, 6-weeks postoperatively, and 6-months postoperatively. One-way repeated measures ANOVA compared scores at each interval. Scores for women with confirmed endometriosis were compared to those without endometriosis.

**RESULTS:** 31 of 44 enrolled women completed the 6-month assessments (70.5% response). American Society of Reproductive Medicine stage ranged from 0 (n=6, 19.4%), 1 (n=14, 45.2%), or 2 (n=11, 35.5%). 22 women had histologic evidence of endometriosis (70.9%).

Mean EHP-30 scores significantly decreased preoperatively to 6-months postoperatively (65 vs. 28.5,  $p<0.001$ ) with improvement in all subscales. VAS pain scores improved in most domains at 6 months (Table 1). With the exception of dysmenorrhea, women with and without endometriosis did not report different scores preoperatively. 6-month EHP-30 scores improved and did not differ between groups, though dyschezia and nonmenstrual pain improved more for women with endometriosis (Table 2).

**CONCLUSION:** Complete pelvic peritonectomy for CPP improves quality of life and pain symptoms. Women with CPP without endometriosis may also experience improvement.

