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

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

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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.

