MAYO CLINIC

Dexmedetomidine Improves Outcomes for Laparoscopic Cholecystectomy

Password: dexmedetomidine

Administering Dexmedetomidine During Laparoscopic Cholecystectomy Improves Postoperative Outcomes

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INTRODUCTION

- Opioids are important in medicine, though their use can lead to multiple negative effects
- Misuse can have detrimental impacts on the economy and population health
- Dexmedetomidine can decrease opioid consumption and postoperative pain scores while also decreasing postoperative nausea and vomiting (PONV) associated with opioids and general anesthesia

OBJECTIVE

- To evaluate a midwestern institution's use of dexmedetomidine in laparoscopic cholecystectomies and compare the findings to those noted in current literature

METHODS

- Retrospective study, data extracted from 76 patients undergoing laparoscopic cholecystectomy
- There was an even split of 38 patients in both the intervention group, who received dexmedetomidine, and the control group who did not
- Exclusion criteria included pregnancy, chronic opioids consumption, emergent procedures, or those who had received a cumulative dose of less than 0.2 mcg/kg

RESULTS

- Demographic data found in Tables 1 and 2
- Intervention data found in Table 3
- A *p*-value ≤ 0.05 indicates statistical significance

TABLE 1: AGE & WEIGHT

Table 1. Age and weight outcomes for intervention versus control groups

	Age		Weight (kg)	
	Intervention	Control	Intervention	Control
Mean (SD)	45.3 (18.1)	57.1 (15.6)	97.8 (23.9)	92.2 (17.2)
Minimum	18	28	59	53.4
Maximum	85	87	177	130
p-value	0.003		0.24	

Notes: SD = Standard deviation

TABLE 2: GENDER & ASA

Table 2. Gender and ASA outcomes for intervention versus control groups

	Gender	ASA
X^2	1.75	3.60
df	1	3
p-value	0.19	0.31

Notes: X^2 = Chi-Squared test, df = degrees of freedom

TABLE 3: INTERVENTION OUTCOMES

Table 3. Intervention outcomes table for intervention versus control groups

	Cumulative OMEs (mg)	Pain Scores (1-10)	PONV Experienced (%)	Minutes to Extubation	PACU LOS (min)
Intervention	75.6	3.0	7.9	2.4	59.8
Control	80.3	3.5	26.3	2.8	57.6
p-value	0.17	0.40	0.03	0.72	0.69

Notes: LOS = length of stay

CONCLUSION

- This institution could utilize dexmedetomidine differently to decrease opioid consumption
- PONV significantly decreased
- All other intervention data points not significant
- Could this institution utilize dexmedetomidine as part of an ERAS protocol?

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- Scan the QR code to read our doctorate paper, PowerPoint and references. Password: dexmedetomidine