NABILONE AS ANALGESIC ADJUVANT DURING GENERAL ANESTHESIA IN LAPAROSCOPIC COLECISTECTOMY

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Introduction and goal of study

- Laparoscopic cholecystectomy is a minimally invasive surgical procedure that forces the anesthesiologist to employ methods that, in addition of allowing optimal surgical conditions, offers the patient an adequate anesthetic state and perioperative analgesia, bringing a safe and efficient option.
- Opioids are administered frequently, being remifentanil one of the more widely used. Unfortunately, in Mexico, most health institutions don't have access to it and therefore fentanyl is still in use. Although it's not the ideal drug for intravenous infusion, the study of its pharmacokinetic and pharmacodynamics allow us to use it appropriately, making use of its potency, its excellent residual analgesia and if's safety in non-ambulatory surgery.
- Even though opioids are integral part in perioperative pain management, now there's a focus on the use of adjuvant drugs that through physiologic or pharmacologic synergy to provide the patient with greater pain relief.
- **Objective:** Value the efficacy of premedication with 2mg of nabilone as analgesic adjuvant to fentanyl during general anesthesia in patients undergoing laparoscopic cholecystectomy.

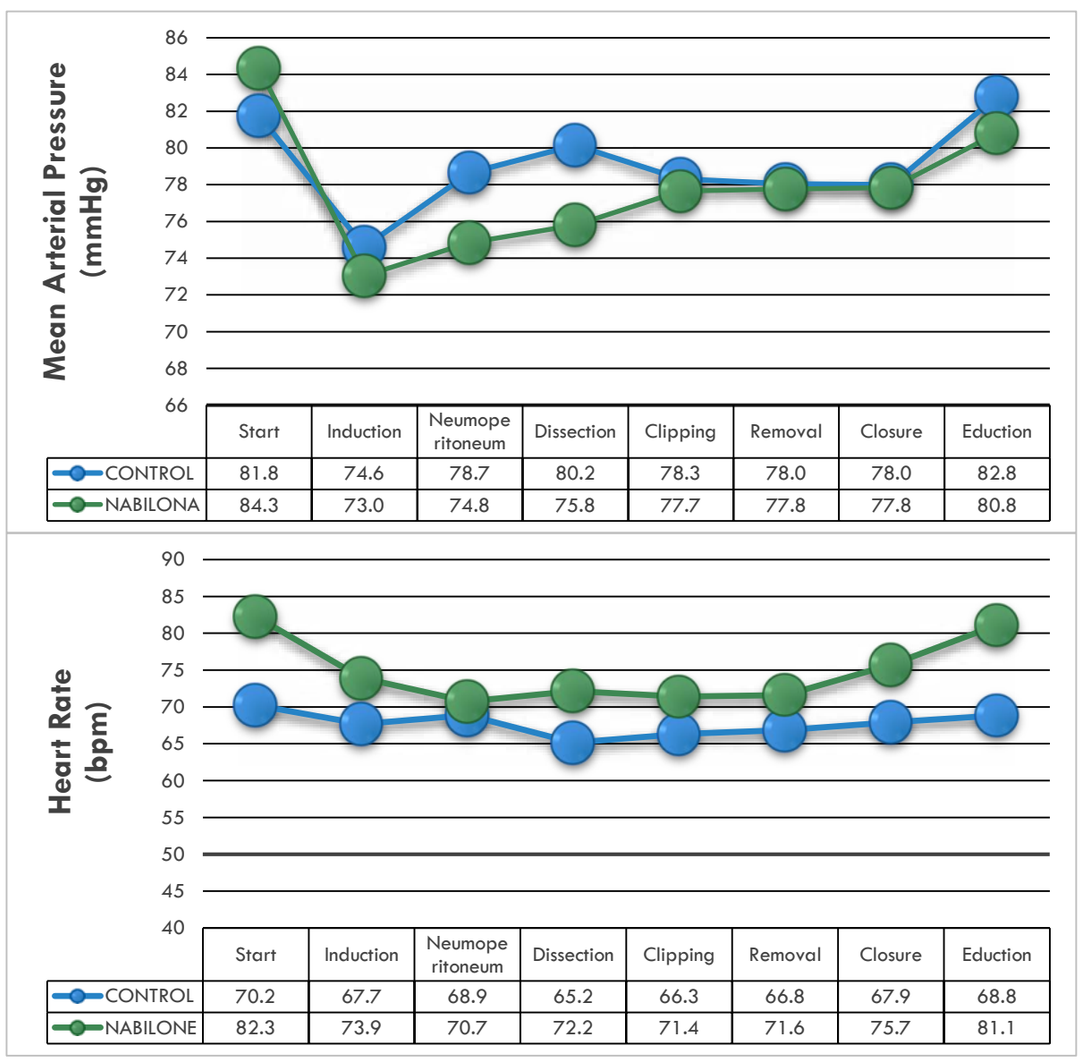
Methods

- A controlled clinical trial was performed. It included 52 patients aged 18 to 60, ASA I-II, IMC <30 kg/m2, scheduled electively. Pregnant or lactating patients were excluded, as well as those with addictions and with psychiatric disease.
- These volunteers were divided at random in 2 groups of 26 subjects each. The patients of Group II, nabilone were administrated 2 hours before surgical procedure. Both groups used an established induction protocol. Transanesthesic maintenance was done with Desflurane 1MAC and continuous perfusion of fentanyl, registering dose and calculated plasmatic concentration, adjusting the opioid dose according to clinical parameters, not allowing increases in heart rate and blood pressure larger than 10%. In addition, adverse effects associated with administration of fentanyl and nabilone, as well as the presence of postoperative pain, were reported. Pearson's Chi^2 test was used for qualitative variables and Student's T distribution for quantitative variables, with a CI of 95%.

Results

There were significant statistical differences in calculated plasmatic concentrations of fentanyl (<p 0.05), showing that the group medicated with nabilone used 45.5% less opioid during transanesthesic, having found no statistical differences in the presence of post-surgery pain. Absence of postoperative nausea and vomiting was demonstrated in patients who were premedicated with nabilone (<p 0.05).

Fig 1. Comparison of values in mean arterial pressure and heart rate during the transanesthesic time.



	Start	Induction	Neumoperitoneum	Dissection	Clipping	Removal	Closure	Eduction
CONTROL	81.8	74.6	78.7	80.2	78.3	78.0	78.0	82.8
NABILONA	84.3	73.0	74.8	75.8	77.7	77.8	77.8	80.8

	Start	Induction	Neumoperitoneum	Dissection	Clipping	Removal	Closure	Eduction
CONTROL	70.2	67.7	68.9	65.2	66.3	66.8	67.9	68.8
NABILONE	82.3	73.9	70.7	72.2	71.4	71.6	75.7	81.1

Fig 2. Comparison of Calculated Plasmatic Concentrations of Fentanyl in both groups.

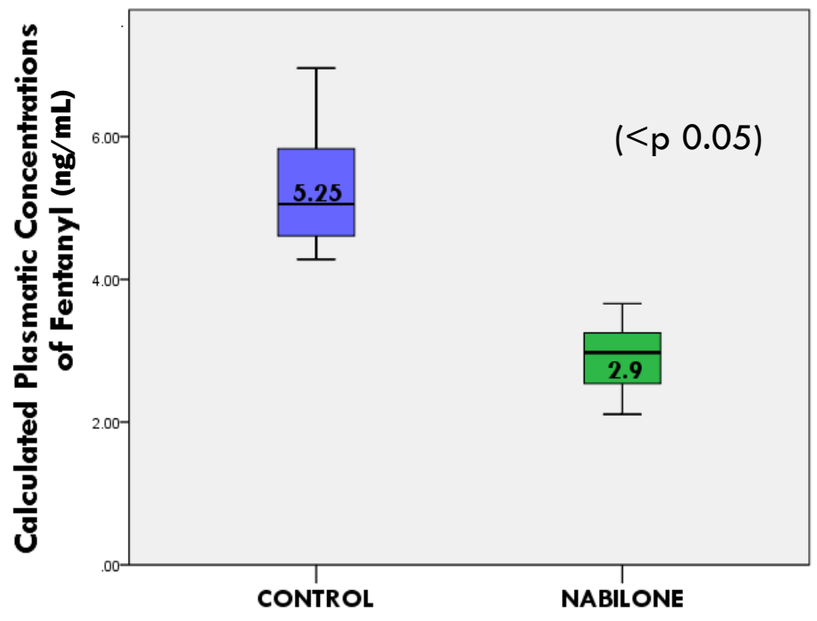


Table 1. Description of the adverse effects in both groups.

	CONTROL n=26 n(%)	NABILONE n=26 n(%)	p
PONV	8 (30.8)	0 (0)	0.002
Dizziness	10 (38.5)	7 (26.9)	0.375
Dry mouth	5 (19.2)	20 (76.9)	0.000
Blurry vision	6 (26.1)	13 (50)	0.044

PONV=Post-operative nausea and vomiting

Conclusions

Nabilone is effective as an analgesic adjuvant, and due to its pharmacological properties it can be used as preanesthesic medication, after proving to be a secure drug. Although a larger sample number and more thorough investigations are required.

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