

Abstract

ERASAsia1012

Incidence of postoperative nausea and vomiting in laparoscopic cholecystectomy between using preoperative intravenous fluid loading, ondansetron and control group: a randomized control trial

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Objectives:

Ondansetron is one of standard guideline for postoperative nausea and vomiting (PONV) however there are some adverse events eg. headache and cardiac arrhythmia. Preoperative intravenous (IV) fluid loading is an alternative prophylaxis for PONV without potential side effects from pharmacological approach. The aim of this study was to compare the incidence of PONV after laparoscopic cholecystectomy (LC) between preoperative IV fluid loading, ondansetron and receiving neither fluid nor ondansetron.

Methods:

A prospective randomized controlled study in adult patients undergoing elective LC at Buddhachinaraj hospital from July 2017-August 2018. Patients were allocated to three groups: Fluid group receiving IV fluid loading with 10ml/kg of Acetar before operation, Ondansetron group receiving IV 8mg of ondansetron before finish operation and Control group receiving neither of them. The primary outcome was the incidence of PONV within 24 hours and secondary outcomes were perioperative complications.

Results:

171 patients were enrolled and total 156 patients were analyzed. Demographic data, history of motion sickness/PONV and smoking were not statistically different. The incidences of PONV were 29.1% in the Fluid group, 18.4% in the Ondansetron group and 25% in the Control group ($p=0.442$). The incidences of morphine consumption and dizziness in ondansetron group were higher than other groups significantly, $p=0.003$ and $p=0.028$ respectively.

Conclusions:

Incidences of PONV during the first 24 hours after LC of patients receiving preoperative IV fluid loading and ondansetron were not significantly different from patients receiving nothing. However patients in ondansetron group had more pain and dizziness than the other groups significantly.

References:

Gan, T.J., et al. Consensus guidelines for the management of postoperative nausea and vomiting. *Anesthesia & Analgesia*, 2014;118,85-113. Apfel, C.C., et al. Supplemental intravenous crystalloids for the prevention of postoperative nausea and vomiting: quantitative review. *British journal of anaesthesia*, 2012;108,893-902.

