

# Comparing the Effects of Diphenhydramine and Granisetron in Preventing Nausea and Vomiting and Pain after Laparoscopic Cholecystectomy: A Randomized Clinical Trial

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## ABSTRACT

**Objective:** Considering that nausea and vomiting are very common after laparoscopic cholecystectomy surgery, it is important to take preventive measures. Also, no method has been able to completely prevent nausea and vomiting after surgery; In this study, the effects of two drugs granisetron (as a specific inhibitor of 5HT-3 receptor) and diphenhydramine (as an antihistamine) were evaluated.

**Materials and Methods:** In this one-blind clinical trial that was conducted in 2019 with the participation of patients who were candidates for elective laparoscopic cholecystectomy surgery (120 patients), the patients were randomly divided into two groups. Patients in the granisetron group received 3 mg of this drug 15 minutes before extubation, and patients in the diphenhydramine group received 50 mg of this drug intravenously 15 minutes before extubation. The intensity of pain, intensity of nausea and vomiting, occurrence of nausea and vomiting, dose of metoclopramide and opioid were compared between two groups.

**Results:** The average  $\pm$  standard deviation of the severity of nausea and vomiting at all measured times in the granisetron group was insignificantly lower than the diphenhydramine group ( $P < 0.05$ ), also the need for metoclopramide was always lower in the granisetron group. It was less than the group receiving diphenhydramine ( $P < 0.05$ ); On the other hand, the pain intensity at all times in the group receiving granisetron was insignificantly lower than the group receiving diphenhydramine ( $P < 0.05$ ).

**Conclusion:** Granisetron slightly reduces nausea and vomiting, the need for metoclopramide, and pain intensity after laparoscopic cholecystectomy compared to diphenhydramine.

**Keywords:** Granisetron, Diphenhydramine, Nausea and Vomiting, Pain, Laparoscopic Cholecystectomy

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