TITLE: DOES GASTRIC SUCTION ENHANCE THE EFFICACY OF DROPERIDOL PROPHYLAXIS OF POST-OPERATIVE NAUSEA AND VOMITING?

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Nausea and vomiting after outpatient surgery has been ascribed to anxiety, laparoscopic manipulation, opioid drugs, nitrous oxide, pain, and sudden position changes.[1] Although outpatients have increased pre-anesthetic gastric volume[2], the effect of removal of this volume on the incidence of nausea and vomiting has not been studied. The purpose of this study was to evaluate the efficacy of prophylactic gastric suction on the incidence of nausea and vomiting in droperidol pre-treated patients undergoing outpatient laparoscopy.

After approval by the Institutional Review Board for Human Investigations, 62 female patients (ASA 1 & 2), undergoing outpatient laparoscopy, received informed consent and were randomly divided into two groups. After pre-treatment with curare 3 mg IV, induction was accomplished with thiopental 5 mg/kg IV. This was followed by alfentanil 8 μg/kg IV, droperidol 20 μg/kg IV, succinylcholine 2 mg/kg IV, and endotracheal intubation. Anesthesia was maintained with isoflurane, 50% N_2O in oxygen, and a succinylcholine infusion 0.2%. Following intubation, Group I patients (n = 33) had a double lumen orogastric tube inserted and received continuous gastric suction until just prior to extubation, at which time the suction catheter was removed. Group II patients (n = 29), the control group, did not receive gastric suction.

Observers, blinded to whether suctioning was performed, assessed each patient for the presence of nausea, retching, or vomiting (N, R, V) in the postoperative period. The presence of any of these signs during the observation period was scored as a positive response.

The Student's t-test showed that there were no statistical differences between Groups I and II (or between those patients with N, R, or V and those without N, R, and V) as to age, weight, intraoperative fluids and duration of procedure. The failure of gastric suction in reducing the incidence of N, R, or V was demonstrated by Chi-Square analysis ($p = 0.2975$) when statistical significance is accepted at $p < 0.05$. (Table)

	N,R,or V YES	N,R,and V NO	TOTAL
GROUP I (suction)	12 19.35%	21 33.87%	33 53.23%
GROUP II (no suction)	7 11.29%	22 35.48%	29 46.77%
TOTAL	19 30.65%	43 69.35%	62 100%

Since our data suggests, that in this patient population, gastric suction does not add to the efficacy of droperidol prophylaxis in preventing postoperative N, R, or V, routine gastric suction done for this purpose appears to be unnecessary.

References
1. Anesthesiology 57:A330, 1982
2. Can Anaesth Soc J 25:36, 1978

A20

TITLE: VITAL CAPACITY RAPID INHALATION INDUCTION (VCRII) WITH DESFLURANE

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The high lipid solubility of currently available anesthetics requires a 3 - 4 MAC overpressure for the VCRII technique At these concentrations airway irritability can be profound but lowering overpressure concentrations results in prolonged induction and excitement phases. These limitations may be overcome by decreasing the solubility of potent anesthetics. We report our experience with VCRII using the insoluble agent desflurane.

After receiving approval of our IRB and written consent, 12 patients received VCRII with either high (3 - 4 MAC) or low (2- 2.5 MAC) concentrations of desflurane. Time(T_L) was measured from the first breath of desflurane until loss of response to verbal command (LOC). Inspired(D_I-LOC) and end - tidal concentrations of desflurane (D_{Et}-LOC) at LOC were recorded. A blinded observer interviewed the patients on the first postoperative day and obtained a patient acceptability score of 1 (unpleasant) to 10 (pleasant).

Mild to moderate coughing was noted in all (7/7) patients receiving the high concentrations of desflurane, but in only 2/5 patient receiving the low concentrations. Brief laryngospasm not requiring treatment was noted in one patient in the high group. The data are summarized in table 1.

Table 1.	LOW (N=5)	HIGH (N=7)	P
Age (years)	58.8 (26-75)	51.8 (27- 69)	
Weight (kg)	81.7 (64-115)	83.7 (61-102)	
T_L (sec)	45.4 (40-50)	47.2 (30-75)	
% D_I-LOC	14.8 (14-16)	21.8 (18-28)	0.01
%D_{Et}-LOC	9.9 (8.2-13)	15.2 (11-18)	0.05
Acceptability	4.2 (1-8)	6.1 (1-10)	

All values mean (range). D = desflurane

When a lower inspired concentration of desflurane was used, we observed that LOC could be achieved with a marked decrease in airway irritability. The significantly lower inspired and end-tidal concentration of desflurane did not significantly prolong induction time. The low blood:gas solubility coefficient of desflurane (0.42) enables rapid equilibration of this agent; therefore, overpressure and resultant side-effects can be minimized when used in an inhalation induction. Definition of the optimal concentration of desflurane for the VCRII technique may enable anesthesiologists to provide an acceptable induction alternative to the intravenous route. VCRII with desflurane may prove useful for pediatric inductions. Further, adult patients undergoing ambulatory procedures may be anesthetized without the need for intravenous induction agents; recovery and discharge times may be shortened. Further investigation of the optimal concentration of desflurane for VCRII is ongoing. We feel that the decreased solubility of desflurane offers significant advantages over other currently available inhalational anesthetics for VCRII.