

40265 - SUPPLEMENTAL OXYGEN AND 24 HOUR POSTOPERATIVE NAUSEA AND VOMITING

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INTRODUCTION: Postoperative nausea and vomiting (PONV) is amongst one of the most common and distressing side effects of general anesthesia. Persistent PONV has a negative impact on clinical outcomes i.e. dehydration, bleeding, aspiration, prolonged PACU stays and unplanned hospital admissions (1). Among patients undergoing prolonged inpatient surgery, there is evidence indicating supplemental intraoperative oxygen prevents PONV to the same extent as ondansetron prophylaxis (2,3). This study will assess the effect of supplemental intraoperative oxygen on early and late PONV in ambulatory patients undergoing short elective laparoscopic tubal ligation.

METHODS: With REB approval, 304 eligible patients were randomized in a double blind manner into 2 groups: Routine - oxygen 30%/air 70% (n=152) or Supplemental - oxygen 80%/air20% (n=152). All patients received standardized general endotracheal anesthetic and postoperative medications. Pre, intra and postoperative variables were recorded. Outcome assessments were done in PACU and post discharge for 24h.

RESULTS: Of the 304 subjects enrolled, 12 subjects were excluded and 8 crossovers. As part of an intention to treat analysis, the crossovers were included in the final data set of 292 subjects (Routine n=145/ Supplemental n=147).

Comparison of Intra-operative and Post-operative Variables and Outcome Assessments by Group Randomization.

	Routine O2 n=145	Supplemental O2, n=147	p
Surgery Duration (min)	21.0	22.3	0.22
Anesthesia Duration(min)	42.6	45.3	0.02*
Intra-op Fentanyl (μ)	148.0	157.5	0.10
Time in PACU (min)	83.0	81.6	0.20
Total IV fluids (ml)	1316.8	1270.8	0.29
PACU Morphine (ME)	10.0	10.5	0.54
Rec'd PACU Antiemetics	33.8%	29.3%	0.24
PACU Nausea	39.3%	33.3%	0.33
PACU Vomiting	13.1%	10.2 %	0.47
Post-Discharge Nausea	57.6%	57.1%	1.00
Post-Discharge Vomiting	2.8%	1.4%	0.44
Any Nausea and /or Vomiting in first 24h	65.3%	68.7%	0.62

ME=Morphine Equivalents / Indicates *p<0.05

All demographic and intra-operative variables were similar between groups. There were no differences in any of the PACU variables including Aldrete score, hemodynamics, narcotic use, administered IV fluids, and time in PACU. Ninety-four (65.3%) subjects who received Routine Oxygen compared to 101 (68.7%) who received Supplemental Oxygen experienced the primary outcome variable of either nausea and / or vomiting during the initial 24 postoperative hours ($p=0.62$). There was no difference in nausea alone, vomiting, or anti-emetic use in either the PACU or up to 24h post discharge. Sub-group analysis (without crossovers) also showed no significant difference in the primary outcome (Routine 90 (65.2%) / Supplemental 100 (69%) ($p=0.59$).

DISCUSSION: The use of supplemental intra-operative oxygen compared to routine oxygen concentrations during ambulatory laparoscopic procedures of short duration does not afford protection against PONV in the initial postoperative 24hours.

REFERENCES:1)Anesthesiology 1992;77:162-84 2)Anesthesiology 1999;91:1246-52 3)Anesth Analg 2001;92:112-7