26470 - HYPOXEMIA ON ARRIVAL TO PACU: AN OBSERVATIONAL AUDIT

Naveed Siddiqui MD, James Teresi, FRCPC; Cristain Arzola, MD; Gordon Fox, Mount Sinai Hospital And University Of Toronto, Toronto, CANADA, Canada

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INTRODUCTION: The incidence of complications in post anesthesia care unit (PACU) varies from 6 to 30% depending on various studies [1]. Hypoxemia is a major problem in the immediate postoperative period. There are conflicting reports and no guidelines in the literature regarding the use of oxygen during transport from OR to PACU. [2,3]. The purpose of our study was to identify the practice patterns for patient transport following general anesthesia in our institution and to evaluate desaturation (oxygen saturation < 90 % measured by pulse oximetry) with patient characteristics and transport patterns.

METHODS: After REB approval, we conducted a quality assurance audit at our hospital. All elective surgical patients under general anesthesia admitted to the PACU between April – June 2005 were included prospectively. Medical conditions predisposing to low oxygen saturation were excluded. Following variables were recorded: patients demographics, type of surgery, duration of anesthesia, transport patterns (oxygen supplementation, calculated transport time). Sedation score, respiratory rate, temperature, shivering and pain score were noted on arrival to the PACU. In order to find associated factors, the sample was divided in two groups according to desaturation ($\leq 90\%$). Statistical analysis was performed using a Student's t and chi-squared tests where appropriate, followed by a multivariable analysis (stepwise multiple logistic regression). P-value < 0.05 was considered significant.

RESULTS: Of 502 patients enrolled, 43.4% were transported with oxygen supplementation. On arrival to PACU, 19.3% experienced desaturation. Only 0.8% of the patients with oxygen supplementation had oxygen saturation $\leq 90\%$. Findings on the recorded variables and the p-value associated with desaturation are shown on the table. The associated factors were high BMI, duration of anesthesia, transport without oxygen, sedation and respiratory rate on arrival to PACU. After multivariable analysis only transport without oxygen, respiratory rate and sedation remained significant. When observations were controlled by supplementation with oxygen none of the above risk factors were found to be statistical significant.

DISCUSSION: Based on our results, less than 50% of the patients were transported with oxygen. The incidence of desaturation in the whole sample was almost 20% and the most significant factor was transport without oxygen. Other factors were sedation score and respiratory rate on arrival to the PACU. Our findings confirm previous study results [4] and we conclude that oxygen supplementation should be considered after every general anesthetic.

REFERENCES: 1) Anaesth Analg 1992; 74:503-9. 2) Anesth Analg 1985; 64:1108 –12
3) Anesth Analg.1995, 80(2): 368-72 4) Anaesth Intens Care 1987, 15: 147 -150

	<i>n</i> = 502	<i>p</i> -value
Age (yrs)	49.20 (17.1)	0.730
Sex (male/female)	36.82 / 63.18 *	0.580
BMI (kg/m ²)	26.35 (5.01)	0.018
ASA (I/II/III/IV)	17 / 59.3 / 20.9 / 2.81 *	0.158
Surgery # (a/b/c/d/e)	10.8 / 25.1 / 34.1 / 15.9 / 14.1 *	0.338
Duration of anesthesia(min)	153.87 (125.02)	0.040
Transport with O ₂ (yes/no)	43.4 / 56.6 *	0.000
Transport Time (sec)	57.06 (22.96)	0.353
Sedation (0/1/2/3)	43.5 / 41.7 / 10 / 4.8 *	0.001
Respiratory rate (resp/min)	13.63 (3.24)	0.001
T ^o	36.2 (0.62)	0.718
Shivering (yes/no)	98.4 / 1.6 *	0.622
VAS (< 5 / > 5)	57.2 / 42.8 *	0.418

Mean(SD); * relative frequencies; p -value

a =upper limb, b=lower limb, c=abdominal, d=maxillo-oral, e =pelvic