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POSTER DISCUSSION XIII

A1107

Title: **ARE THE LEGISLATORS CORRECT? SHOULD A URINALYSIS BE REQUIRED BEFORE ELECTIVE OUTPATIENT SURGERY?**

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Some states require a routine urinalysis (U/A) be performed before the administration of an anesthetic for elective surgery in a freestanding ambulatory surgical facility.[1] Interestingly, similar requirements do not exist for hospital-based ambulatory surgery programs. We undertook this study to determine what benefit, if any, such mandatory preoperative laboratory screening offers to patients.

With the approval of the review board of each institution and with patient consent, 1700 patients completed an automated health history questionnaire, HealthQuiz. This device provided a printout of suggestions for preoperative laboratory tests (including U/A) based on an algorithm utilizing the patient's symptoms. Surgeons and/or anesthesiologists also ordered preoperative tests for patients based upon their findings in a conventional history and physical examination. Abnormal and significantly abnormal test results were defined prospectively and noted. Significantly abnormal results are those values outside of reported limits that might warrant treatment of a specific abnormality.[2] On the day of surgery, patients' anesthesiologists (different from the physician who ordered the tests and blinded to the method of test selection) were queried postoperatively to determine whether any abnormal result changed perioperative patient management and, if so, whether such a change resulted in harm or benefit to the patient.

Of a total of 715 U/A results obtained, 142 (19.9%) were abnormal, 12 (1.7%) were significantly abnormal, and 1 (0.14%) affected care; in the opinion of the blinded anesthesiologist caring for the patients on the day of surgery, *none* of the patients received perioperative benefit from a change in patient management because of a U/A test result.

Since the preoperative U/A was ordered only after a thorough preoperative history and physical, and not in a random, unscreened fashion, the design of this study was biased toward finding benefit from the preoperative U/A. Nevertheless, we were unable to demonstrate any such benefit for patients perioperatively. We conclude that abnormalities are commonly found on U/A. These abnormal results, however, do not usually lead to beneficial changes in patient management. Thus, U/A, although initially inexpensive (average cost, $14.00), becomes an expensive test to justify on a cost/benefit basis.

1. Illinois Ambulatory Surgical Treatment Act, 1987
2. JAMA 253: 3576-3581, 1985

A1108

Title: **Is coloscopic preparation with oral Polyethyleneglycol 2 hours before general anesthesia safe in ambulatory patients?**

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Introduction: Risk factors regarding inhalation of gastric contents are frequently encountered in outpatients(1) even if overnight fasting is respected (2). Ambulatory patients scheduled for coloscopy under general anesthesia, are ordered 1 liter of Polyethyleneglycol (PEG) orally 2 hours before. This solution which contains an osmotic agent and bicarbonate enhances the emptying of the gastroduodenal tract (3). Thus, the goal of this preliminary study was to assess gastric pH and residual gastric volume (RGV) in this setting.

Methods: After the approval by our local Ethical committee, 20 ASA 1-2 patients scheduled for coloscopy, consented to participate to the study. Patients were randomly divided in 2 groups: those in the placebo group (P) (n=10) fasted at least 6 hours prior to coloscopy whereas patients in the PEG group (n=10) ingested 1 liter of Polyethyleneglycol 2 hours before coloscopy. After light sedation, the endoscopist who was unaware of the protocol, performed a gastric fibroscopy and aspirated all the residual gastric volume (RGV), the gastric pH being measured using a pH strip. Thereafter, coloscopy was performed under light general anesthesia using propofol and halothane via a face mask. Statistics included a Student's t test for quantitative parameters and Chi square test with Yates correction when necessary for qualitative data. $p < 0.05$ was considered as statistically significant.

Results: Results are shown in table 1. The mean interval time between the last ingestion and gastric fibroscopy was significantly higher in group P. Considering that a pH < 2.5 or a RGV > 25 ml are risk factors regarding inhalation of gastric contents, Figure 1 illustrates the percentage of patients in each group presenting these risks.

Discussion: PEG administration increases gastric pH significantly in all patients since the pH of this solution is equal to 7.4. However, mean RGV values were not higher in group PEG: this is due to the fact that this liquid solution is known to accelerate the emptying of the stomach and the duodenum. In conclusion, the ingestion of 1 liter of PEG 2 hours before general anesthesia for coloscopy decreases the pH risk without affecting the RGV risk of inhalation of gastric contents.

Refernces:1- Ong BY et al: Can Anaesth Soc J 1978, 25: 38-39. 2- Sutherland AD et al: Br J Anaesth 1986, 58: 876-878. 3- Davis GR et al: Gastroenterology 1980, 24: 211-216.

	PEG group (n=10)	Placebo group (n=10)	Statistics
age (years)	56 ± 14	59 ± 19	NS
weight (kg)	69 ± 16	60 ± 15	NS
sex (M/F)	6/4	6/4	NS
time interval (min)	110 ± 17	661 ± 73	*
mean pH	6.25 ± 0.27	2.35 ± 0.47	*
mean RGV (ml)	38 ± 18	35 ± 15	NS

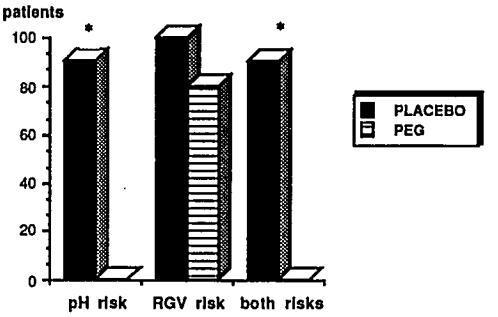

FIGURE 1: % of patients at risk in each group
*** $p < 0.05$**