**T1323**

**Quality of Patient Referral Information for Open Access Endoscopic Procedures**

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The Institute of Medicine report on the consequences of medical errors highlights the issue of patient safety and has received great attention. For gastroenterologists, rising demand for colonoscopy coupled with streamlined scheduling protocols that eliminate a consultation prior to procedures increases the need for competent and accurate patient referral information. Our division allows referring physicians to directly schedule endoscopic procedures (Procedure-on-Demand; POD). Prior to scheduling a POD, a Patient Information Form (PIF)containing the minimum clinically pertinant information required to perform a safe prep and procedure, must be completed by the referring physician. This study reports on the quality of PIF for POD, and was approved by the Institutional Review Board.Between April 1, 2005 and July 30, 2005, all POD done by two full time gastroenterologists were included. Prior to the procedure, every patient was interviewed by telephone or in person by an RN to verify the accuracy of the PIF. We recorded any discrepancies and verified them by direct interviews with patients or caregivers. 868 POD were performed (313 endoscopies,555 colonoscopies) from 114 referring physicians. 76 (8.8%) of the PIF contained inaccurate information with 95 information errors deemed serious enough to potentially cause adverse patient outcomes. All of the errors were of omission (incorrectly reported the absence of a relevant condition). In 16 cases (1.8%) referral information incorrectly indicated that patients were not on medications that increased bleeding. In 22 cases (2.5%), information about relevant allergies was incorrect. There were 25 incidents wherein highly relevant medical diagnoses were omitted along with 48 incidents of omissions of relevant current medications. In 10 cases, the wrong procedure ($n = 2$) was ordered or an incorrect indication ($n = 8$)was noted. Among the 114 referring physicians requesting POD, 48 (42%) incorrectly recorded at least one piece of relevant patient information Based upon our examination of 868 POD cases, highly relevant patient referral information was inaccurate in 8.8 percent of the cases. This is an exceedingly high number given that these were active errors of omission. We find that use of an information referral process that ensures fully a completed PIF is insufficient to protect patients from referral information errors. Additional work is needed to identify why inaccurate information gets recorded in order to facilitate functioning of primary care physicians as care managers and to protect patients from unnecessary risk.

**T1324**

**Paradoxical Effect of Oral Lorazepam in a Premedication for ERCP**

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Restlessness often complicates ERCP and may be a reason for premature termination of the procedure. To evaluate whether a premedication with orally administered lorazepam could reduce the need for sedatives and improve sedation quality, we studied 95 patients undergoing ERCP in a randomized double-blind trial. Methods: Inpatients scheduled for ERCP (age 20-85 years) received either 1 mg lorazepam ($n = 47$) or placebo ($n = 48$). The sedation was induced by midazolam (0.03-0.10 mg/kg) and propofol (0.3-1.0 mg/kg) and maintained by bolus doses of propofol (20-50 mg), S(+)-ketamine (25 mg), and in longer procedures additional midazolam (1-5 mg) administered by the endoscopist's impression of the patient's state. All patients were continuously monitored by pulse-oximetry, oscillometric blood pressure measurements, and assessment of a sedation score. The amount of sedatives needed to achieve an adequate sedation was protocolled. The endoscopist and after recovery the patients were asked to rate their impression of the procedure. Results: All patients were successfully sedated and the satisfaction with the sedation achieved highest rates in 87 vs. 71% (lorazepam vs. placebo) if rated by the endoscopist and 77 vs. 83% if rated by the patients. Heart rate, oxygen saturation and blood pressure did not differ between the groups. States of restlessness (44 vs. 46) and oxygen desaturation $<85\%$ (12 vs. 12) occurred similarly often and could all be handled within short time. The total amount of midazolam ($2.4 \pm .2$ vs. $2.4 \pm .2$ µg/kg/min; mean $\pm$ SEM) and propofol ($71 \pm 5$ vs. $63 \pm 4$ µg/kg/min) needed to achieve an adequate sedation did not differ between the groups. Patients who had received lorazepam needed significantly more ketamine ($15.8 \pm 1.4$ vs. $11.3 \pm 1.2$ µg/kg/min; $P < .05$) and propofol in the period 5-10 minutes after induction ($275 \pm 39$ vs. $159 \pm 37$ µg/kg; $P < .05$). Discussion: The higher amounts of sedatives needed in the lorazepam group are most likely due to an occupation of the benzodiazepine receptor by lorazepam exerting a lower intrinsic activity than midazolam. Hence, the action of midazolam is assumed to be competitively antagonized by the premedication with lorazepam. The study indicates that orally administered lorazepam is contraproductive in a premedication for ERCP.

**T1325**

**The Impact of Patient-Selected Music On the Tolerability of Colonoscopy: A Prospective, Randomized, Double-Blind, Placebo-Controlled Study**

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The use of sedating medication (SM) during colonoscopy increases the risk of complications. Several unblinded studies have demonstrated that unspecified music can improve patient satisfaction (PS) and reduce medication requirements. This study was performed to assess whether music truly decreases SM requirements and improves PS with colonoscopy. Methods: Outpatients undergoing colonoscopy were offered inclusion. Exclusion criteria were abdominal pain, history of inflammatory bowel disease and colectomy. Pre-procedure interviews included a modified State/Trait anxiety evaluation and alcohol/drug/analgesic history. Patients chose music from a broad selection of CD's provided by our staff; they were encouraged to select music similar to that which they would listen to at home. Ear buds were secured and the volume set at a level preferred by the patient but not audible to anyone else in the room. After an initial bolus of SM, a non-participant opened the randomization envelope to determine whether the music would be played or not. Upon completion of the procedure, the endoscopist(s) and nurse evaluated the patient's anxiety, pain and comfort level, the difficulty of the procedure, and whether they had remained blinded. Patients were interviewed in recovery by a blinded nurse to assess their comfort, pain, anxiety and satisfaction with the procedure. Results: 46 (28F, 18M) patients participated. The age, race, sex, weight, past/current alcohol and drug usage, pre-procedure anxiety scores, surgical history, and time to cecal intubation were similar between the music group (MG) and the non-music group (NMG). The average amount of midazolam (M) required for MG (3.7 mg $\pm$ 0.26; mean $\pm$ SEM) was significantly less than that required for NMG (4.4 mg $\pm$ 0.27); $p < 0.05$. The amount of fentanyl (F) used was not significantly less for MG (87.5 mcg $\pm$ 6.2) than for NMG (95.5 mcg $\pm$ 5.1); $p = 0.16$. Among women with prior pelvic surgery ($N = 15$) the average amounts of M and F required for MG (3.8 mg $\pm$ 0.59; 90.6 mcg $\pm$ 13.3) were not significantly different that in the NMG group (4.9 mg $\pm$ 0.44; 103.3 mcg $\pm$ 7.4); $p = 0.07$; $p = 0.21$. Post-procedure, both groups were similar in terms of anxiety, pain, comfort level and procedure difficulty (NS). There were no complications in either group. Conclusions: This randomized, doubled-blind, ''placebo''-controlled study demonstrates that playing patient-selected music during colonoscopy reduces sedative requirements (midazolam) without sacrificing satisfaction. Patient-selected music during colonoscopy should be utilized to reduce the risk associated with sedation and possibly to decrease the costs of medication.

**T1326**

**One Hour Fast for Liquids Prior to Endoscopy Is Safe, Effective and Results in Minimum Patient Discomfort**

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Introduction: Current guidelines for endoscopy advice at least 6-8 hours fasting for solids and at least 4 hours for liquids. This is claimed to ensure safety and a clear endoscopic view. However, prolonged fasting may result in patient discomfort. Also due to practical delays the fasting period for endoscopy may be much longer, thus causing even more discomfort to patients. Several anaesthesia societies now recommend a 2-h pre-operative fast for clear fluids and a 6-h fast for solids in most elective patients. A pilot study done by us showed the time for a clear liquid (tea) or water to empty from the stomach using real-time ultrasonography was one hour. Aims: To determine whether a one-hour fast prior to endoscopy was safe, effective and resulted in less patient discomfort. Methods: 63 patients referred for endoscopy, without alarm symptoms or clinically obvious motility problems, were recruited. Patients were given a standard meal 6 hours before endoscopy. They were then randomized to either nil by mouth for 6 hours (group A, $n = 31$) or allowed to take clear fluids up to one hour prior to endoscopy (group B, $n = 32$). Just prior to endoscopy patients indicated discomfort due to fasting on a visual analog scale (0-no discomfort to 10-severe discomfort). Investigators were blinded to the period of fasting. Presence of fluid in the gastric fundus was noted, and endoscopic vision was graded as good, average or poor. Patients were followed one week after the procedure for the presence of any late complications. Results: Discomfort was significantly lower in group B than group A (median visual analog score 0.3 vs. 5.1; $p < 0.0001$, Wilcoxon two-sample test). Endoscopic vision was good in all 31 patients in group A and 30 in group B, and average in 2 patients in group B. None were graded as poor. Fluid in the gastric fundus was noted in 7 patients in group A and 10 in group B. There were no complications in either group. Conclusions: A one-hour fast for clear liquids seems safe and effective and has minimum discomfort for the patient. However, a larger study should be done before the current endoscopic guidelines are revised.