10,124 endoscopic procedures of the colon (8,987 colonoscopies and 1,137 flexible sigmoidoscopies) were performed. Patients had an average age of 59 years (range 15-103) and 55 percent were female. Therapeutic endoscopy and emergency endoscopy were performed in 24% (n=2,385) and 0.7% (n=75), respectively. Forty-two percent of the patients underwent colonoscopy under sedation (n=4,202). There were 15 colonic perforations (0.15%). Colonoscopy had an approximately two-times higher risk for CP than flexible sigmoidoscopy (0.16% vs 0.09%). Patient gender, emergency endoscopy, anesthetic method, and a specialty or experience of the endoscopist were not significantly predictive of CP rate (Table 1). In mutlivariate analysis, patient older than 75 years (odds ratio=6.24, 95% confidence interval 2.26-17.26) and therapeutic endoscopy (odds ratio=2.98, 95% confidence interval 1.08-8.23) were the only two independent risk factors for CP. Conclusion: Incidence of CP in the WGO Endoscopy training center in Thailand was 0.15%. Patient older than 75 years and therapeutic colonoscopy were two important risk factors for CP.

Table 1. Univariate analysis of risk factors for colonoscopic perforation

Variable	Odds ratio (95% confidence interval)	P-value
Age over 75 Procedure (therapeutic vs diagnostic) Endoscopy (colonoscopy vs sigmoidoscopy) Trainee involvement Endoscopic examination under sedation Endoscopist (gastroenterologist vs surgeon) Male Endoscopic setting (emergency vs elective)	6.05 (2.19-16.70) 2.85 (1.03-7.85) 1.77 (0.23-13.51) 1.63 (0.58-4.59) 1.61 (0.58-4.45) 1.08 (0.39-2.99) 1.07 (0.39-2.96) 1.00	< 0.001 0.035 1.00 0.35 0.35 0.88 0.89 1.00

M1350

A Randomized Trial of 181 Patients to Topical Anesthesia with Lidocaine Versus Lidocaine Plus Xylometazoline for Unsedated Ultrathin Transnasal Upper Gastrointestinal Endoscopy

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Background: Ultrathin unsedated transnasal endoscopy is an emerging tool for endoscopic evaluation of the upper gastrointestinal tract. Topical anesthesia, with or without a nasal vasoconstrictor/decongestant, is required but the optimal regimen is unknown. Nasal vasconstrictor/decongestants, such as xylometazoline, may potentially improve nasal cavity patency and reduce epistaxis. Objectives: To determine the tolerance and effectiveness of lidocaine versus lidocaine plus xylometazoline for topical anesthesia in unsedated transnasal endoscopy. Methods: Participants were prospectively randomized to lidocaine plus xylometazoline (LX) versus lidocaine (L) for unsedated transnasal 4.9 mm ultrathin endoscopy. The primary outcome was overall procedural discomfort rated on a 10-point scale (1 = no discomfort to 10 = severe discomfort). Secondary outcomes were pain, gagging, endoscopist-rated insertion difficulty, encounter times, epistaxis, and adverse events. For each outcome, the mean ±SD were estimated within treatment groups; differences in the means and 95% CI are presented. Results: A total of 181 patients (mean age 40 ± 17 years) were randomized to LX (n = 94) and L (n = 87). Baseline characteristics were similar in both groups. Overall procedural discomfort was similar for LX and L [4.2 ± 2.4 vs 3.9 ± 2.1, 0.29 (95% CI -0.96,0.39)]. Transnasal insertion difficulty was lower on average with LX compared to L [2.4 ± 2.1 vs 3.2 ± 2.8, -0.80 (95% CI -1.54,-0.06)]. LX, compared to L, was associated with less time needed to apply anesthesia [2.4 ± 1.8 vs 3.5 ± 2.2 min, -1.10 (95% CI -1.71,-0.50)], less time for insertion [3.2 ± 1.8 vs 3.9 ± 2.2 min, -0.70 (95% CI -1.30,-0.10)] and less overall encounter time [21.4 ± 6.0 vs 24.3 ± 5.8 min, -2.90 (95% CI-4.64,-1.09)]. Epistaxis was rare but occurred less frequently with LX compared to L. Conclusions: There was little difference in tolerance between L and LX for unsedated transnasal endoscopy. However, LX was associated with less difficulty with endoscope insertion, and reduced insertion time and epistaxis.

M1351

Changes in Trainee Attitudes Towards Advanced Endoscopic Training Over Time

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Background: Opportunities for training in advanced endoscopic procedures (ERCP and EUS) are limited due to high demand and a relative paucity of fourth year "advanced" fellowship positions. We previously surveyed incoming fellows at the 2006 ASGE-sponsored First Year Fellows' Endoscopy Course, held in the first few months of fellowship, regarding attitudes and expectations towards advanced endoscopic training (AET) and found an overwhelmingly high (73%) level of interest in AET. Interest was high among both men and women, albeit somewhat higher in men (78% versus 59%). However, few respondents wishing to pursue AET were interested in endoscopic research (21%). The purpose of this follow-up study was to reassess attitudes towards AET later in training, by which point fellows would be expected to have clearer career goals. Methods: A 21-question survey was mailed to participants of the 2006 ASGE-sponsored First Year Fellows' Endoscopy Course at the end of their second year of fellowship training in the spring of 2008. This follow-up survey assessed interest in AET and knowledge of society guidelines regarding minimum thresholds for assessing competence. Results: Responses were obtained from 66 (22%) of 298 course participants. 58% and 47% of respondents expressed interest in training in ERCP and EUS, respectively. However, among 22 women, 15 (68%) were not interested in ERCP training, 5 (23%) were interested, and 2 (9%) were unsure. In contrast, among 43 men, 8 (19%) were not interested in ERCP training, 33 (77%) were interested, and 2 (5%) were unsure. Interest in ERCP training differed significantly between men and women ($p<0.01$, Fisher's exact test). Most women (61%) were not interested in EUS training, while over half the men (56%) were interested. However, these gender differences were not statistically significant ($p=0.08$, Fisher's exact test). Among respondents interested in ERCP (n=36) and EUS (n=30) training, only 19 (53%) and 9 (30%) correctly identified the number of ERCPs and EUSs, respectively, required to meet competency guidelines. Consistent with the previous survey, interest in endoscopic research remained low (27%). Conclusions: Interest in AET declined by the end of the second year of fellowship training, due in large part to loss of interest among women. Those who remained interested in advanced endoscopic procedures were not necessarily familiar with society guidelines regarding training thresholds for assessing competence. Based on these findings, the ASGE should consider promoting AET among women trainees, educating trainees regarding training guidelines, and supporting trainees engaged in endoscopic research.

M1352

Colonoscopy Skills Transfer from a Second-Generation Virtual Reality Simulator to Patients: A Multinational Randomized Blinded Controlled Trial

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Introduction: Training on virtual reality simulators has been shown to improve skills for novice endoscopists compared to no training. However, to date simulators have not accurately modelled colonic looping, and thus the training potential is limited as loop management is a key factor in skills development. A second-generation colonoscopy simulator has been specifically designed to model colonic looping and has the potential to teach knowledge and skills as effectively as standard training with no risk to patients and minimal instructor input. The new Olympus colonoscopy simulator was assessed for training in transferable skills. Methods: 37 novice trainees from four centers in the UK, Italy and the Netherlands were pre-assessed on the simulator using three previously validated cases. They were randomized to 16 hours training on the simulator (subjects, N=19) or on patients (controls, N=18) in a standardized fashion. All participants were then re-assessed on the same three simulator cases and on three live cases by blinded expert endoscopists using validated assessment instruments. Results: On simulator cases, subjects achieved significantly better post-training results on previously validated metrics such as completion rate (95% vs 70%, $p=0.001$), completion time (407 vs 743, $p=0.001$) and loop resolution ($p<0.001$) than the controls. They also demonstrated superior technical skills on safety aspects such as excessive insertion with an embedded tip (35% vs 74%, $p<0.001$) and obscured lens (5% vs 41%, $p<0.001$), and on simulated patient factors such as maximum pain scores (0.24 vs 0.45, $p=0.002$). Logistic regression confirmed significantly greater changes in performance for the subjects compared to controls from the pre-assessment across multiple measures. On the live cases, the subjects achieved equivalent success in terms of completion rates (11% vs 7%, $p=0.51$), distance intubated (48cm vs 52cm, $p=0.35$), Directly Observed Procedure Scores (16 vs 18, $p=0.92$), and Global Scores (16 vs 17, $p=0.35$). There was a marked decrease in instructor time (4 hours vs 16 hours), organization and effort required for training the simulator group. Conclusion: There is excellent skills transfer from the simulator to real colonoscopy. The simulator trained group demonstrated equivalent performance outcomes on real patients suggesting initial training can effectively be employed utilizing a simulator rather than real patients. This would reduce the burden both on patients and on instructors, and it should be considered as an additional training and assessment tool in the development of skills in colonoscopy.

M1353

Is a Six Hour Fast After a Rice Meal Sufficient Before Upper Gastrointestinal Endoscopy?

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