Purpose: Hirschowitz et al found lower levels of B12 in patients taking PPI therapy (1,2) leading some to advise checking of B12 levels in patients on chronic PPI therapy (2). We examined the prevalence of B12 deficiency in patients on PPI therapy and neuropathy incidence as an end point.

Methods: A data base analysis of electronic medical records, covering 31 million patients across 120 hospitals in the US, with a diagnosis of GERD was done. Patients were divided into 3 cohorts. Those with treatment with PPI only, those with H2 blocker only and finally patients with GERD but no treatment. Vitamin B12 levels must have been checked after being on treatment for at least 3 years.

Results: Vitamin B12 was checked in 9.2% of patients using PPI for GERD therapy, and in 8% of patients on H2 blockers.
Patients diagnosed with GERD and PPI, who had Vitamin B12 level checked numbered 59,880. 23,840 had abnormal Vitamin B12 level (39.8%) with 8860 developing neuropathy (14.7%).
Patients with GERD and H2 blocker, who had their Vitamin B12 level checked were 23,280, of which 9520 had abnormal Vitamin B12 level (40.8%) and 3210 developed neuropathy (13.7%).

Limitations: PPI and H2 antagonist therapy are available as OTC drugs. Our data base will not have captured this information and may actually be an underestimate of the use of these agents. Additionally a data base is only as good as the information entered which may skew data. The database did not allow evaluation of degree of deficiency amongst cohorts.

Conclusion: The study suggests that PPI or H2 blockers lead to vitamin B12 deficiency and development of neuropathy compared to patients without treatment with either drug. Patients who are white and male are at higher risk.
There is no difference between the use of PPI and H2 blockers in the development of neuropathy caused by low Vitamin B12. We advocate for greater emphasis on monitoring of B12 in patients who are on acid suppression to prevent the serious complication of neuropathy and believe this issue deserves greater attention given the widespread use of these medications.

<table>
<thead>
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<th>Age</th>
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<th>B12 and H2 blockers with exclusions and neuropathy, n=3210</th>
<th>GERD without PPI or H2 blocker, n=3890</th>
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**TITLE:** Beyond the acid: What about the B12?

**Fig. 1:** Exclusion Criteria and Data Analysis

(*)

**IMAGE CAPTION:** Fig. 1: Exclusion Criteria and Data Analysis

(*)
Purpose: Patients with familial adenomatous polyposis (FAP) are known to be at increased risk for gastric adenomas. The clinical features of gastric adenomas in FAP have not been well characterized, and there is a lack of standardized approach to management of these lesions. The aim of this study was to describe the endoscopic appearance, risk factors, clinical course and response to therapy of gastric adenomas in patients with FAP.

Methods: We retrospectively reviewed the records of 97 patients with FAP who underwent esophagogastroduodenoscopy (EGD) at Mayo Clinic (Florida, Rochester and Arizona) between 2004 and 2013.

Results: Nine patients (9.2%) had biopsy-proven gastric adenomas. Adenomas were located in the antrum (five patients), in the body and fundus in the setting of background fundic gland polyps (FGP) (three patients), and in the body not associated with FGP (one patient). Adenoma size was 3-40 mm and the number of adenomas per patient ranged from one to 20. Adenomas in the antrum were flat and subtle, whereas those in gastric body or fundus were polypoid and difficult to differentiate from cystic FGP seen in patients with FAP. The performing endoscopists reported difficulty in identifying adenomas, and six patients had at least one EGD within the previous three years where gastric adenomas were not reported. Adenomas were classified as tubular in eight patients, and tubulovillous in one patient. High-grade dysplasia was noted in one patient. After a follow-up of 63 months (interquartile range: 20-149), no patient in our entire cohort (with or without gastric adenomas) developed gastric cancer. The FAP patients in whom gastric adenoma developed, as compared to those without gastric adenoma, were more likely to be younger [36 ± 12 vs. 48 ± 15 years, p=0.02], have concomitant chronic gastritis [22% vs. 0%, p=0.008], and have desmoid tumors [5(56%) vs. 19(22%), p 0.04].

Conclusion: Gastric adenomas are not uncommon in patients with FAP and are often difficult to identify endoscopically. Endoscopists should have a high degree of suspicion for gastric adenomas in these patients and a low threshold to biopsy. Given the benign clinical course, recommended initial management is conservative with endoscopic therapy and periodic surveillance.
TITLE: Gastric Adenomas in Familial Adenomatous Polyposis are Common, But Subtle, and Have a Benign Course
(No Image Selected)
Title: C-reactive Protein As A Useful Prognostic Marker For Predicting Prognosis of Stage IV Gastric Cancer

Abstract Body:

Purpose: C-reactive protein (CRP) and albumin have recently gathered attention as factors for Glasgow Prognostic Score (GPS), which determines prognosis for malignancies, not to mention gastric cancer. However, which and how these factors relate to prognosis is still undefined. Multidisciplinary treatments are implemented for stage IV gastric cancer with few evidences. The aim of this study was to clarify the role of C-reactive protein and albumin as a prognostic factor for stage IV gastric cancer patients.

Methods: 123 stage IV gastric cancer patients accumulated from April, 2005 to March, 2011 were investigated. Clinicopathological factors, serum CRP and albumin values were analyzed. Univariate and multivariate Cox proportional regression model were used to identify favorable factors affecting overall survival. Furthermore, we utilized Receiver Operating Curve (ROC) to determine the cut-off value of CRP in patient groups according to their prognosis.

Results: Among 123 patients, 91 were male. Median age was 69 years (range: 26-88 years). Stage IV patients defined by H-, P- and CY-factor were 46 (37.4%), 62 (50.4%) and 39 (45.3%), respectively. Median value of CRP and albumin were 0.6mg/dl and 3.4g/dl, respectively. Chemotherapy was carried out in 108 (97.8%) patients and primary tumor resection in 72 (58.5%). Univariate analysis showed age 70 or more, no resection, no chemotherapy, M-factor other than H, P, and CY, high CRP value, low albumin value, EOCG performance status 2 or more as statistically significant. Multivariate analysis demonstrated systemic chemotherapy (odds ratio (OR) 2.47; P<0.01), reduction surgery (OR 3.62; P<0.01) and CRP (OR 1.11; P<0.01), M-factor other than H, P, CY (OR 2.26; P<0.01) and EOCG Performance Status 2 or more (OR 2.35; P<0.01) to be independent prognostic factors for survival. Area under the curve by ROC of patient groups by prognosis (3, 6, 12 months) were 0.85, 0.69 and 0.71 and cut-off values were 0.8mg/dl (sensitivity 76.5%, specificity 78.1%, accuracy 77.9%), 0.8mg/dl (67.5%, 67.9%, 67.8%), 0.4mg/dl (66.2%, 61.5%, 64.2%), respectively.

Conclusion: Stage IV gastric cancer patients whose distant metastatic factors are limited within H, P or CY and serum CRP is low, are candidates for better prognosis if resection and chemotherapy are carried out. Preoperative serum CRP, not albumin, turned out to be one of the prognostic factors for stage IV gastric cancer patients. CRP cut-off value changes according to prognosis.
TITLE: C-reactive Protein As A Useful Prognostic Marker For Predicting Prognosis of Stage IV Gastric Cancer
(No Image Selected)
Purpose: In 2009, FDA's safety communication warned that omeprazole reduced the antithrombotic effect of clopidogrel by almost half. The aim of this study was to assess the impact of the FDA safety communication on prescription trends of clopidogrel in combination with PPIs.

Methods: Adult clopidogrel users were identified from a large retrospective US claims database. Rates of combination therapy were estimated in 6-month intervals between Jan 2006 to Mar 2012 for patients with ≥1 clopidogrel Rx fill and continuous plan enrollment for the previous and current 6-month intervals. Combination therapy was defined as clopidogrel-PPI use for ≥30 consecutive days during the interval. The probability of combination therapy pre- and post-safety communication period (11/17/2009) was compared.

Results: 327,368 pre- and 277,821 post-safety communication patient intervals were identified. On average, 34.1% of patients in the pre-period and 15.9% in the post-period used a PPI-clopidogrel combination therapy; the probability of combination use fell almost two thirds (OR=0.36; p<0.001) (Figure). Among patients using combination therapy, the % using omeprazole changed insignificantly (33.9 vs. 34.39%), the % using esomeprazole decreased (48.7 vs. 32.9%) and the % of those using pantoprazole increased the most (9.9 vs. 24.0%). Trends were similar for all and newly treated patients, regardless of indication and physician specialty. But, among new combination therapy patients, the % using omeprazole increased (34.3 vs. 38.2%; p<0.001).

Conclusion: The FDA safety communication resulted in an overall decrease of PPI use by patients using clopidogrel. However, among patients receiving combination therapy, about one third still used omeprazole and a similar proportion still used esomeprazole after the FDA safety communication.
Eric Wu : ACG Non-Member

AVERAGE SCORE: 3.5

REVIEWER FLAGS: (none)

REVIEWER RECOMMENDATION CODE DESCRIPTION: None

REVIEWER COMMENTS:

(no table selected)

TITLE: Impact of the FDA Safety Communication on Prescription Trends of Clopidogrel in Combination with Proton Pump Inhibitors

IMAGE CAPTION:
TITLE: On the imprisonment of human thought under the traditional marriage

PRESENTER: Bing Dai
PRESENTER (INSTITUTION ONLY): Peking Union Medical College Hospital
PRESENTER (COUNTRY ONLY): China

ABSTRACT BODY:
Purpose: On the imprisonment of human thought under the traditional marriage

Methods: On the imprisonment of human thought under the traditional marriage

Results: On the imprisonment of human thought under the traditional marriage

Conclusion: On the imprisonment of human thought under the traditional marriage

CURRENT CATEGORY: B. Stomach
PRESENTATION TYPE: Oral Only

ACG Research Grant Support: Yes
Supported by Industry Grant: No
Commercial Products or Services: Yes
Initiated Research: Investigator
Financial Relationships: Yes
Extra Info: SAFEGUARDS AGAINST COMMERCIAL BIAS

FDA Approval: Yes
Designed Study: Investigator
Abstract Author: Industry

AUTH DESIG: ACG Membership Status <font color="red">*</font>:
Bing Dai : ACG Non-Member

AVERAGE SCORE: No average score available
REVIEWER FLAGS: (none)
REVIEWER RECOMMENDATION CODE DESCRIPTION: None
REVIEWER COMMENTS:
[No Reviewers assigned]
TITLE: On the imprisonment of human thought under the traditional marriage
Purpose: Helicobacter-negative chronic active gastritis (HNCAG) is a histopathologic entity characterized by diffuse chronic active inflammation in a pattern typically encountered in H. pylori gastritis, but with no organisms detectable. A recent study found no evidence to support any of the most commonly offered hypotheses: sampling error, recent use of antibiotics, and effects of proton pump inhibitors (Nordenstedt et al., Am. J. Gastro 2012). The purpose of this study was to determine whether the epidemiologic patterns of HNCAG were sufficiently different from those of H. pylori gastritis, providing additional evidence that the two entities are unrelated.

Methods: We extracted histopathologic and demographic information from the Miraca Life Sciences database for all patients with gastric biopsies (1.2008 to 6.2012). We then selected two groups: patients from ZIP codes where the mean tissue prevalence of H. pylori infection was ≤6% (“low-prevalence”) and those from ZIP codes with a mean prevalence ≥12% (“high-prevalence”). Each group was then stratified in 8 age groups and the relative prevalence of H. pylori gastritis and HNCAG were compared in each age group.

Results: From 596,480 unique patients with gastric biopsies (median age 57 y; 62% F), we extracted 79,874 subjects from low-prevalence areas (median age 57 years; 60.8% female) and 156,445 subjects from high-prevalence areas (median age 61.9; 61.9% female). Figure 1 shows that in high-prevalence areas, H. pylori infection increased from 14.5% in children to a maximum of 21% in the 5th decade, and declined to 13.8% after age 80; in low-prevalence areas H. pylori infection increased steadily in each decade, from 2.8% in children to 6.0% in subjects >80 years. In contrast, Helicobacter-negative-CAG increased with age in an identical fashion among subjects from both areas, to reach a maximum prevalence of 3.8%.

Conclusion: If H. pylori-negative chronic active gastritis represented “missed infections” (i.e., cases of H. pylori gastritis in which organisms could not be detected) one would expect its prevalence and demographic distribution to parallel that of H. pylori gastritis. Instead, the distribution of HNCAG is virtually identical in the two groups and appears unrelated to the prevalence of H. pylori. These findings provide strong support to the concept that HNCAG is a distinct condition, unrelated not only to H. pylori infection, but also to the socioeconomic factors associated with it.
TITLE: Helicobacter-negative Chronic Active Gastritis is a Distinct Nosologic Entity, Not Simply Missed Helicobacter Infection

IMAGE CAPTION:
Title: Successful Endoscopic Ultrasound Guided biopsies of gastric Muscularis Propria in Gastroparesis Patients.

Presenter: Mohamed Othman

Presenters Institution Only: Texas Tech University HSC at El Paso

Abstract Body:

Purpose: Loss of Interstitial Cell of Cajal (ICC) in the muscularis propria (MP) and inflammatory changes in the myenteric plexus are reported from full thickness biopsies (FTB) of the stomach wall in patients with gastroparesis (GP). These findings can aid in the diagnosis and treatment selection. However FTB use is limited by the need for surgery. We hypothesized that Endoscopic Ultrasound guided core biopsies (EUS-CB) can obtain sufficient MP tissue for histological examination in GP patients. We investigated the efficacy and safety of EUS-CB of the stomach antral wall in GP and compared the tissue to a surgically obtained FTB in the same patient.

Methods: This is a prospective non-randomized feasibility trial. Patients with GP who were undergoing gastric neurostimulator placement were enrolled. Patients had a biopsy done by EUS FNA with a 19 gauge core needle followed by FTB obtained surgically during neurostimulator placement within 24 hours. Endoscopic and surgical specimens were compared for tissue morphology, count of ICC (c kit stain), enteric neurons (S100 stain) and fibrosis (trichome) for each patient. Correlation coefficient of the ICC count per HPF was used to compare both specimens. Safety of the endoscopic procedure was assessed by examining the site of EUS biopsy during surgery as well as observing clinical outcomes.

Results: Five female patients (mean age 41.6) were enrolled in the trial (4 diabetic and 1 idiopathic GP). EUS guided core biopsies were successful in obtaining sufficient tissue for histological assessment of ICC in all patients and for the myenteric plexus in 60% of patients. (Table 1). There was a high correlation Coefficient (0.8) when comparing both surgical and endoscopic groups for the loss of ICC. Figure 1 shows C kit staining for ICC in the endoscopically obtained specimen. Mild serosal bruising and/or localized hematoma formations were noted at the sites of EUS biopsies in all 5 patients but no serosal tear or perforation was noted. No post procedure complications were reported.

Conclusion: EUS –CB of the gastric MP in GP patients is safe and provides enough tissue for complete histological assessment. This relatively non invasive approach can replace surgical FTB and will revolutionize the diagnosis and management of patients with GP.

Current Category: B. Stomach

Presentation Type: Oral or Poster

ACG Research Grant Support: No

Supported by Industry Grant: No

Commercial Products or Services: No

Initiated Research: Investigator

Financial Relationships: No

FDA Approval: No

Designed Study: Investigator

Abstract Author: Investigator

Auth Design: ACG Membership Status:

Mohamed Othman : ACG Member
Brian Davis : ACG Non-Member
Alireza Torabi : ACG Non-Member
Irene Sarosiek : ACG Member
Richard McCallum : ACG Member

Average Score: 4

Reviewer Flags: (none)

Reviewer Recommendation Code Description: None

Reviewer Comments:
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<th>Case#</th>
<th>Age</th>
<th>Sex</th>
<th>EUS Cells of Cajal (Ckit+)</th>
<th>Surgical sample cells of Cajal (c-KIT+)</th>
<th>EUS nerve bundle (s100+)</th>
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<td>Female</td>
<td>4-5/HPF (2 pieces of muscularis)</td>
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<td>No nerve bundle present</td>
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</table>

**HPF:** High Power Field

**TITLE:** Successful Endoscopic Ultrasound Guided biopsies of gastric Muscularis Propria in Gastroparesis Patients.

**C kit staining for ICC on EUS biopsy.**

**IMAGE CAPTION:** C kit staining for ICC on EUS biopsy.
Purpose: The International Agency for Research on Cancer classified Helicobacter Pylori (H. pylori) as a carcinogen in 1994, despite conflicting results at the time. Since then, colonization of the stomach with H. pylori has been increasingly accepted as an important cause of stomach cancer and of gastric mucosa-associated lymphoid tissue (MALT) lymphoma. Infection with the bacteria is also associated with a reduced risk of esophageal adenocarcinoma. We hypothesized that patients with non-cardiac gastric cancer will be likely to have active H. pylori infection when they are diagnosed for gastric cancer compares to patient with gastric cardia cancer.

Methods: A retrospective chart review was performed from January, 1995 to December, 2005 on patients who had an inpatient or outpatient upper endoscopic evaluation. Patient who did not have gastric cancer were excluded. Eligible patients were assigned to two groups: patient who has gastric cardia cancer (cancer of the top inch of stomach) and patient who has non-cardiac gastric cancer (cancer in of all other areas of stomach). Logistic regression analysis was performed using prevalence of active H. pylori infection (on gastric biopsy or pathology report) as predictor variable in both groups.

Results: 122 patients were diagnosed with gastric tumors. 13 patients were excluded (9 B cell lymphoma patients, 3 GIST patients, a carcinoid patient), 109 patients with gastric adenocarcinoma met inclusion criteria. Demographic and clinical data were shown in table 1.

Conclusion: Patients with non-cardiac gastric cancer were more likely to have history of H. pylori infection and active H. pylori infection when they are diagnosed for gastric cancer compare to patients with gastric cardia cancer.

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<thead>
<tr>
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<th>Non-Cardiac gastric cancer</th>
<th>Gastric cardia cancer</th>
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<td>58 +/- 15</td>
<td>50 +/- 13</td>
<td>0.092</td>
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<tr>
<td>Gender (Male)</td>
<td>81.63%</td>
<td>54.55%</td>
<td>0.052</td>
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</tr>
<tr>
<td>Smoker</td>
<td>54.08%</td>
<td>90.90%</td>
<td>0.023</td>
</tr>
<tr>
<td>Family History of gastric cancer</td>
<td>10.20%</td>
<td>09.09%</td>
<td>1.000</td>
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<tr>
<td>History of H. Pylori infection</td>
<td>46.93%</td>
<td>09.09%</td>
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</tr>
<tr>
<td>Active H. Pylori infection</td>
<td>30.61%</td>
<td>00.00%</td>
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**TITLE:** Positive Correlation Between Non-Cardiac Gastric Cancer and Active *Helicobacter Pylori* Infection
(No Image Selected)
Purpose: Clarithromycin-resistant *Helicobacter pylori* (H. pylori) is associated with point mutations in the 23S rRNA gene. The eradication rate may be increased if the regimen is selectively administered based on clarithromycin resistance, according to the presence of the 23S rRNA point mutation.

Methods: Patients in the APC group, which consisted of 308 randomly assigned participants, were treated by standard triple therapy with amoxicillin, rabeprazole and clarithromycin; 308 participants in the APM group were treated with amoxicillin, rabeprazole and metronidazole. For the 263 participants in the case group, a test for point mutations in the 23S rRNA gene of H. pylori was conducted. A new method of "tailored therapy" was devised, in which amoxicillin, rabeprazole and clarithromycin were given in the absence of a mutation, while clarithromycin was replaced by metronidazole when the mutation was detected.

Results: The eradication rate of H. pylori for the tailored group was 91.2% (176/193), and significantly higher than those of APC and APM control groups, which are 75.9% (214/282) and 79.1% (219/277), respectively (P<.001). In the tailored group, the eradication rate based on the presence of a 23S rRNA point mutation was higher in the wild type than in the mutation, with values of 94.9% (131/138) and 81.8% (45/55), respectively (P<.05). Of the 263 patients who tested positive for H. pylori infection according to PCR, 57 patients (21.7%) had a 23S rRNA point mutation associated with clarithromycin resistance.

Conclusion: The eradication rate for the tailored therapy according to clarithromycin resistance using PCR was much higher than the standard triple therapy.
Purpose: Background and Aims: Gastric cancer is the fourth most common cancer worldwide, and the second leading cause of cancer-related mortality. Physical activity has been associated with a reduced incidence and mortality from certain cancers. We performed a systematic review and meta-analysis to evaluate the association between physical activity and risk of gastric cancer.

Methods: Methods: We conducted a systematic search of multiple bibliographic databases and conference proceedings from inception through February 2013 for observational studies that examined associations between recreational and/or occupational physical activity and gastric cancer risk. Summary adjusted odds ratio (OR) estimates with 95% confidence intervals (CI) were estimated using the random-effects model.

Results: Results: The analysis included 16 studies (7 cohort, 9 case-control) reporting 11,111 cases of gastric cancer among 1,606,760 patients. Meta-analysis demonstrated that the risk of gastric cancer was 21% lower among the most physically active people as compared with the least physically active people (OR, 0.79; 95% CI, 0.71-0.87) with moderate heterogeneity among studies (I²=55%) (Figure). This protective effect was seen for gastric cancers in the cardia (4 studies; OR, 0.80; 95% CI, 0.63-1.00) and distal stomach (5 studies; OR, 0.63; 95% CI, 0.52-0.76). There was a trend for a dose response effect (larger protective effect when the highest tertile instead of the middle tertile was compared to the least active referent group, p=0.08) (Table). The results were consistent across sex, study design and geographic location (Table). There was no evidence of publication bias, both quantitatively (Begg and Mazumdar’s rank correlation test, p=0.62), and qualitatively, on visual inspection of the funnel plot.

Conclusion: Conclusions: Meta-analysis of published observational studies indicates that physical activity is associated with reduced risk of gastric cancer. Lifestyle interventions focusing on increasing physical activity may decrease the global burden of gastric cancer.

CURRENT CATEGORY: B. Stomach
PRESENTATION TYPE: Oral or Poster
ACG Research Grant Support: No
Supported by Industry Grant: No
Commercial Products or Services: No
Initiated Research: Investigator
Financial Relationships: Not Applicable
FDA Approval: No
Designed Study: Investigator
Abstract Author: Investigator

AUTH DESIG: ACG Membership Status <font color="red">*</font>:
Siddharth Singh : ACG Member
Jithinraj Edakkanalambeth Varayil : ACG Non-Member
Swapna Devanna : ACG Non-Member
Mohammad Murad : ACG Non-Member
Prasad Iyer : ACG Member

AVERAGE SCORE: 3.5
REVIEWER FLAGS: (none)
REVIEWER RECOMMENDATION CODE DESCRIPTION: None
REVIEWER COMMENTS:

Table. Sub-group analyses, as well as dose-response relationship, on the association of
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<td>0.78</td>
<td>0.68-0.90</td>
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**TITLE:** Physical Activity is Associated with Reduced Risk of Gastric Cancer: A Systematic Review and Meta-Analysis

**IMAGE CAPTION:**
The Role of Physician Knowledge and the Inappropriate Initiation of PPI Therapy for Stress Ulcer Prophylaxis in the ICU

Sonaly Patel

Drexel University College of Medicine

United States

Purpose: Our objective was to calculate the rate of inappropriate PPI initiation in an academic ICU and the contributing role of the prescribing physicians’ knowledge of stress ulcer prophylaxis (SUP) as established by the American Society of Health-System Pharmacists (ASHP). Secondary aims were to determine the subsequent rate of continuation of a PPI on hospital discharge, the rate of missed indications for starting SUP and the rate of gastrointestinal bleeding in patients not started on a PPI.

Methods: A retrospective chart review of medical ICU patients on no acid suppression therapy was conducted from January 2012 to December 31, 2012. Demographics including age, sex, ethnicity, comorbidities and ICU length of stay were collected. The rate of inappropriate PPI initiation, the subsequent rate of continuation of PPI on hospital discharge and the rate of bleeding in patients not started on a PPI were determined. A ten question questionnaire about SUP based on ASHP guidelines was administered to prescribing physicians.

Results: Of 477 total patients, 212 patients were excluded due to concurrent acid suppression therapy. 177 patients were started on a PPI for SUP and 88 patients were not. The average age was 54, 56% of the patients were male, 54% were Caucasian, 39% were African-American with an average ICU length of stay of 6.7 days. Of the 177 patients, 101 patients (57%) were inappropriately started on a PPI for SUP. However, only 3 of these patients were subsequently discharged from the hospital on a PPI. Of the 88 patients not begun on a PPI, no indications for SUP were missed and no incidents of gastrointestinal bleeding were reported. Fifty residents who staff the ICU responded correctly to only 42% of the questions for a knowledge deficit of 58% for SUP.

Conclusion: Our study demonstrates that 57% of patients started on SUP were done so inappropriately. The questionnaire suggested that the major determinant was a lack of knowledge of ASHP guidelines. We believe that the inclusion of a PPI in the ICU admission order set leads to reflexive ordering. The rate of patient discharge on inappropriate PPI prescription was very low likely due to a medication reconciliation program that requires documentation of an appropriate indication. Given the implications of PPI use on Clostridium difficile infection, pneumonia and the associated incremental costs, we have proposed targeting this knowledge gap with each resident receiving laminated cards with ASHP guidelines, posting these on all ICU computers and removing PPI’s from the admission order set. Based on the outcomes of our intervention we hope to implement such targeted measures in other areas.

B. Stomach

Oral or Poster

No

No

No

Investigator

No

Investigator

Investigator

Sonaly Patel : ACG Non-Member
Eric Pauley : ACG Non-Member
Bhavik Bhandari : ACG Non-Member

3.25

None
REVIEWER COMMENTS:
Ashwin Ananthakrishnan: [No Comments]
Henry Parkman: [No Comments]
Kia Saeian: [No Comments]
Sachin Wani: [No Comments]
(no table selected)

TITLE: The Role of Physician Knowledge and the Inappropriate Initiation of PPI Therapy for Stress Ulcer Prophylaxis in the ICU
(No Image Selected)
Purpose: Most studies throughout the world have shown a decline in Helicobacter pylori (HP) eradication rates in the past decade. There is a paucity of recent US data regarding real-life HP treatment success. We reviewed the relative efficacies of several commonly used treatment regimens within the Rhode Island population.

Methods: All index cases of HP diagnosed via gastric biopsy, IgG serology, or fecal antigen at Rhode Island Hospital (RIH) during the year 2010 were identified, and demographic data on these patients were collected. The electronic medical records of those patients who followed up with the RIH Medical Primary Care Unit (MPCU), Gastroenterology Fellows Clinic (GIFC), or Faculty Practice (FP) were reviewed to determine whether and what type of treatment was given, and whether there was evidence of a test of cure (TOC) following any attempt at HP eradication. Finally, for those patients who were treated and had a TOC, eradication rates were calculated for each commonly used treatment regimen.

Results: 410 unique index cases of HP were identified in the year 2010. 59% were female and 41% were male, with a median age of 53. Most cases were diagnosed via gastric biopsy (53%), followed by IgG serology (37%) and fecal antigen (10%). Of these 410 patients, 205 (50%) followed up in the MPCU, GIFC, or FP. Treatment was intentionally deferred in 17/205 (8%), while an attempt at eradication occurred in 188/205 (92%). 10 different treatment regimens were identified, although the majority of patients (72%) were treated with a form of “legacy” triple therapy with amoxicillin, clarithromycin, and a proton pump inhibitor (PPI) for 10-14 days. After treatment, a TOC was performed in 73/188 (39%) patients. The TOC was negative and eradication thereby confirmed in 63/73 (86%) cases.

Most patients received legacy triple therapy for 10-14 days with a PPI, clarithromycin, and amoxicillin (metronidazole if penicillin allergic). For those patients with a TOC, eradication rates for all legacy triple therapy variants averaged 90%. Bismuth-based quadruple therapy was successful in 7/9 cases (78%). There was no statistically significant difference in cure rates between any of the examined treatment regimens.

Conclusion: Within the Rhode Island population, traditional triple therapy remains an effective first-line regimen for HP eradication, with a cure rate of approximately 90%. There was no statistically significant difference in cure rates between any of the examined triple therapy variants or in comparison with other regimens.
TITLE: High eradication rates of Helicobacter pylori with standard triple therapy in Rhode Island

(No Image Selected)
ABSTRACT BODY:

**Purpose:** Acid suppression therapy (AST) is one of the most commonly prescribed classes of medications in hospitalized patients. There has been increased use of this medication class over time among hospitalized patients, which might be due to a perception that AST lacks drug interactions and adverse effects. However, proton-pump inhibitor (PPI) has been associated with an increased risk of infections such as Clostridium difficile colitis, colonization of MRSA and VRE. Drug clearance decrease with ago and increase the risk of drug interactions. Objective of our study was to estimate inappropriate use of AST in hospitalized geriatric patients and to create physician awareness of appropriate indications of AST.

**Methods:** Medical records of 817 patients admitted under medical teaching service between July 1, 2012 and December 31, 2012 were reviewed. Patients aged >65 who were started on AST in the hospital were included. Patients on AST before admission, AST not given during hospitalization, surgical and ICU patients were excluded. Data was analyzed using SPSS Version 19. Significant tests of equality of two proportions were carried out using the two tail Fisher’s exact test using Graph Pad software. Student's t-test was used for comparing means of continuous variables. The study was approved by Institutional Review Board (IRB).

**Results:** Among 355 patients who met the inclusion criteria, AST was indicated in 125 (35%) patients, and not indicated in 230 (65%) patients. PPI was the most common group of medicine prescribed (92%). Most common route was PO (90%). The most common indication for AST was prophylaxis against NSAID induced gastritis (54%). Twenty nine (13%) patients who didn't have any indication were discharged on AST

**Conclusion:** Our study showed that there is a widespread use of AST medications among general medical patients, even in geriatric age group. Our results were similar to other studies done previously in adult patients. Physicians need more awareness of the appropriate indications for AST, rather than writing blanket orders for GI prophylaxis for every patient being admitted to the hospital.
ABSTRACT BODY:

**Purpose:** Studies have reported a lower prevalence of *H. pylori* infection in patients infected with the human immunodeficiency virus (HIV) than in the general population; the spectrum of gastric pathology in these patients has not been addressed. Furthermore, many of these studies suffered from small numbers of HIV-infected patients, inadequate or absent control groups, and different detection modalities for *H. pylori*. This study was designed to compare the prevalence of the most common gastric conditions in a group of HIV-positive subjects and in a large cohort of uninfected age-group matched controls.

**Methods:** From the Miraca Life Sciences database we extracted histopathologic, demographic and clinical information from all patients with gastric biopsies obtained between 1.2008 and 12.2012. The prevalence of the most common gastric histopathologic diagnoses, evaluated according to the updated Sydney System (normal mucosa, *H. pylori* gastritis, chronic inactive gastritis, CIG; reactive gastropathy, RG; and intestinal metaplasia, IM) was then compared between patients designated as HIV(+) and presumably HIV(-) subjects within the same age range.

**Results:** There were 186 unique HIV(+) patients (median age 49 years; range 24 to 83; 73.1% M) and 681,582 presumably HIV(-) subjects in the same age group (median age 58 years; range 24 to 83; 38.1% M). HIV(+) patients were younger (*p*<.0001) and more likely to be male (OR 3.68 95%CI 2.71 – 4.98; *p*<.0001). The prevalence of *H. pylori* infection was 14.0% in HIV(+) and 10.0% in HIV(-) patients (OR 1.47 95%CI 0.97 – 2.22; n.s.). The prevalence of CIG (6.5% versus 5.9%), intestinal metaplasia (4.3% versus 4.0%), and reactive gastropathy (19.4% versus 21.1%) were essentially similar in the two groups. Fundic gland polyps were almost half as common in HIV(+) (4.3%) as in HIV(-) patients (8.0%), but the difference failed to attain statistical significance (OR 0.52 95%CI 0.26 – 1.05; n.s.).

**Conclusion:** The prevalence of the most common gastric histopathologic conditions, whether associated (as CIG and IM) or not (RG) to *H. pylori* gastritis, was similar in HIV(+) and negative patients. In most previous studies, the prevalence of *H. pylori* infection in HIV(+) patients was either similar or lower than that of the population from which the sample was drawn. These findings led some investigators to speculate that an intact CD4 population is needed for *H. pylori* to effectively colonize the human stomach. Our results, based on the highly sensitive and specific immunohistochemical demonstration of organisms in the gastric mucosa, rather than on indirect proofs of infection (as in serology or the urea breath test), suggest that HIV infection does not significantly affect gastric mucosal responses.
Purpose: Helicobacter pylori is strongly associated with the development of gastrointestinal disorders. Emerging antibiotic resistance of modern therapies has created a major problem particularly in developing countries. Clinical trial was conducted to evaluate the efficacy of current quadruple and phytomedicine based (mixture of anti-H. pylori components) therapies for the eradication of H. pylori infection and the relief of symptoms in high H. pylori prevalence country of Pakistan.

Methods: One hundred and seventy six H. pylori positive patients (males: 97, females: 79, mean age: 36±12 year) were enrolled in this study and divided into two groups according to treatment regimens. Quadruple therapy with omeprazole (20 mg, bid), amoxicillin (1 g bid), metronidazole (500 mg, bid) and bismuth compound (400 mg, bid) was prescribed for 7 days and phytomedicine-based formulation (Pylorex plus 500 mg tablet contains Curcuma longa rhizomes; 150 mg, Mallotus phillipensis fruits powder; 150 mg, Glycyrrhiza glabra roots; 100 mg and Zingiber officinale rhizomes; 100 mg) twice daily was prescribed for 15 days. C13 urea breath and stool antigen (HpSAg) tests were performed at baseline and after treatment. The gastrointestinal (GI) symptoms (abdominal pain, regurgitation, heart burning, indigestion and flatulence, nausea, vomiting and belching) were evaluated by questioners, using scoring system (absent: 0, mild: 1, moderate: 2, severe: 3).

Results: H. pylori was eradicated in 56 out of 90 patients (62.2%) by quadruple therapy and in 48 out of 86 patients (55.8%) by Pylorex plus therapy. The eradication rate of Pylorex plus therapy was comparable to that of quadruple therapy. However, Pylorex plus therapy have significantly ameliorated GI symptoms not only in H. pylori eradicated patients from baseline (median 8, IQR: 6-10) to one month after treatment (median 3, IQR: 2-6) but also in non-eradicated patients from baseline (median 9, IQR: 7-10) to one month after treatment (median 4, IQR: 2-6). Whereas, quadruple therapy have only relieved GI symptom in H. pylori eradicated patients from baseline (median 9, IQR: 6-10) to one month after treatment (median 4, IQR: 3-7), while lesser improvement in non-eradicated patients from baseline (median 9, IQR: 6-10) to one month after treatment (median 8, IQR: 5-10).

Conclusion: Current quadruple and alternate therapies yielded poor eradication rates (<70%) in developing country, but the later produced marked symptomatic improvement in both H. pylori-eradicated and non-eradicated patients, which might also be promising in functional dyspepsia by dual effects.
TITLE: Quadruple and phytomedicine-based therapies in Helicobacter pylori infection: A randomized comparative trial
Purpose: Although the major burden of heartburn and acid reflux in gastroesophageal reflux disease (GERD) occurs during the awake period, studies of antisecretory drugs used to predict efficacy for the treatment of GERD typically report gastric pH data for 24 hours. This analysis explores the effects of esomeprazole 20 mg on intragastric pH during the 14-hour awake “daytime” period using data from three previously published studies.1-3

Methods: In one double-blind1 and two open-label2,3 randomized studies, intragastric pH was monitored for 24 hours on day 5 of treatment with esomeprazole, both in patients with GERD and healthy volunteers. Post-hoc analyses to determine acid control over the 14-hour daytime period in patients treated with esomeprazole 20 mg were conducted. The mean percentage of time with pH >4 and the proportion of subjects with pH >4 for ≥8 hours during treatment with esomeprazole 20 mg were calculated in each study.

Results: The results are presented in the Table.

Conclusion: Esomeprazole 20 mg provides intragastric pH control throughout at least half of the 14-hour awake period of the day, despite the challenge of food-stimulated acid secretion. Additional analyses of the effects of esomeprazole 20 mg and other proton-pump inhibitors on daytime control of gastric pH are warranted because acid control during the awake period is most relevant for the treatment of frequent heartburn.

REFERENCES:

CURRENT CATEGORY: B. Stomach
PRESENTATION TYPE: Oral or Poster
ACG Research Grant Support: No
Supported by Industry Grant: Yes

Extra Info: This research was sponsored by AstraZeneca, which entered into an agreement with Pfizer for the over-the-counter rights for NEXIUM® (esomeprazole magnesium).

Commercial Products or Services: No
Initiated Research: Investigator
Financial Relationships: Yes

Extra Info: Dr. Katz - Consultant: Ferring, Ironwood, Pfizer Consumer Health, Takeda, Honorarium: Takeda
Dr. Dent - Speakers Bureau: AstraZeneca, Consultant: AstraZeneca, Pfizer, Honorarium: AstraZeneca, Pfizer
Dr. Johnson - Grant Research Support: Expert Sciences Epigenomics, Consultant: Epigenomics
Dr. Traxler - Employee: AstraZeneca R&D
Dr. Rohss - Employee: AstraZeneca R&D
Dr. Lind - Employee: AstraZeneca R&D
Table. Intragastric Acid Control During the 14-Hour Daytime Period With Esomeprazole 20 mg

<table>
<thead>
<tr>
<th>Population</th>
<th>Mean (95% CI)</th>
<th>Proportion of Subjects With pH &gt;4 for ≥8 Hours (a) (95% CI), %</th>
</tr>
</thead>
<tbody>
<tr>
<td>GERD, N=36 (^1)</td>
<td>63.1 (55.5-70.8)</td>
<td>58.3 (40.8-74.5)</td>
</tr>
<tr>
<td>GERD, N=37 (^2)</td>
<td>55.4 (48.5-62.3)</td>
<td>46.0 (29.5-63.1)</td>
</tr>
<tr>
<td>Healthy subjects, N=36 (^3)</td>
<td>51.6 (45.8-57.5)</td>
<td>44.4 (27.9-61.9)</td>
</tr>
</tbody>
</table>

\(a\) Based on the sum of time with pH >4 over the 14-hour period.

**TITLE:** New Analyses of Daytime Acid Control With Esomeprazole 20 mg

(No Image Selected)
Nucleotide-binding oligomerization domain-Like Receptor with a Pyrin domain 3 (NLRP3) is found to be a key part among innate immune responses. Caspase-1, an enzyme that proteolytically cleaves other proteins, could be activated by NLRP3. Active caspase-1 then initiates the process which precursor of IL-1β and IL-18 were activated to inflammatory cytokines. Reported information was showed NLRP3 inflammasome was activated during infection with Helicobacter pylori in mice. We think NLPR3 is an important innate immune molecular in the infection by Helicobacter pylori, it could differently expressed in Helicobacter pylori infectious diseases in human.

OBJECTIVES: This study aimed to address a possible role for NLRP3 and its substrates in the disease of gastric ulcer (GU) infected by Helicobacter pylori.

Methods: 20 Patients of GU, 15 healthy adults were selected. All the patients and normal controls were detected with Helicobacter pylori by endoscopy and rapid urease test. Patients of GU received standard triple therapy (pantoprazole 40mg, for 6 weeks, clarithromycin 0.5g and amoxicillin 1g, for 2 weeks, each administered twice daily). 2 weeks after drug-withdrawal reexamined by endoscopy and rapid urease test. This research includes three groups: normal control, patients of GU before and after treatment. NLRP3 and its cytokine substrates caspase-1, IL-1β and IL-18 were examined by Real-time RT-PCR and cytokine ELISAs in three groups.

Results: Patients of GU were found with activation of NLRP3, caspase-1 and IL-1β in the level of mRNA and protein compared with normal control (p<0.05), but IL-18 showed no significant difference (p>0.05). After triple therapy, expression of NLRP3, caspase-1 and IL-1β showed decrease (P<0.05).

Conclusion: In conclusion, NLRP3, caspase-1 and IL-1β showed differential expression in human when Helicobacter pylori infection. NLRP3 inflammasome could be a key factor in GU when Helicobacter pylori infection. Therefore, targeting NLRP3 inflammasome may be effective for prevention and treatment of GU caused by Helicobacter pylori infection.

CURRENT CATEGORY: B. Stomach
PRESENTATION TYPE: Poster Only
ACG Research Grant Support: No
Supported by Industry Grant: No
Commercial Products or Services: Yes
Financial Relationships: No
FDA Approval: No
Designed Study: Investigator
Abstract Author: Investigator
AVERAGE SCORE: No average score available
REVIEWER FLAGS: (none)
REVIEWER RECOMMENDATION CODE DESCRIPTION: None
REVIEWER COMMENTS: [No Reviewers assigned]
(no table selected)
TITLE: Differential expression of NLRP3 and its substrates in human when Helicobacter pylori infection.
(No Image Selected)
Purpose: BACKGROUND
Nucleotide-binding oligomerization domain-Like Receptor with a Pyrin domain 3 (NLRP3) is found to be a key part among innate immune responses. Caspase-1, an enzyme that proteolytically cleaves other proteins, could be activated by NLRP3. Active caspase-1 then initiates the process which precursor of IL-1β and IL-18 were activated to inflammatory cytokines. Reported information was showed NLRP3 inflammasome was activated during infection with Helicobacter pylori in mice. We think NLPR3 is an important innate immune molecular in the infection by Helicobacter pylori, it could differently expressed in Helicobacter pylori infectious diseases in human.

OBJECTIVES
This study aimed to address a possible role for NLRP3 and its substrates in the disease of gastric ulcer (GU) infected by Helicobacter pylori.

Methods: 20 Patients of GU, 15 healthy adults were selected. All the patients and normal controls were detected with Helicobacter pylori by endoscopy and rapid urease test. Patients of GU received standard triple therapy (pantoprazole 40mg, for 6 weeks, clarithromycin 0.5g and amoxicillin 1g, for 2 weeks, each administered twice daily), 2 weeks after drug-withdrawal reexamined by endoscopy and rapid urease test. This research includes three groups: normal control, patients of GU before and after treatment. NLRP3 and its cytokine substrates caspase-1, IL-1β and IL-18 were examined by Real-time RT-PCR and cytokine ELISAs in three groups.

Results: Patients of GU were found with activation of NLRP3, caspase-1 and IL-1β in the level of mRNA and protein compared with normal control (p<0.05), but IL-18 showed no significant difference (p>0.05). After triple therapy, expression of NLRP3, caspase-1 and IL-1β showed decrease (P<0.05).

Conclusion: In conclusion, NLRP3, caspase-1 and IL-1β showed differential expression in human when Helicobacter pylori infection. NLRP3 inflammasome could be a key factor in GU when Helicobacter pylori infection. Therefore, targeting NLRP3 inflammasome may be effective for prevention and treatment of GU caused by Helicobacter pylori infection.
TITLE: Differential expression of NLRP3 and its substrates in human when Helicobacter pylori infection
(No Image Selected)
Clinical Relevance of 30-minute Retention Value in Diagnosing Rapid Gastric Emptying by a Scintigraphic Test

Purpose: Currently, a 60-min measurement of a standardized gastric emptying scintigraphy (GES) is used for diagnosis of rapid gastric emptying, and shorter intervals such as the 30-min retention value have not been widely utilized. The purpose of our study is to determine the potential diagnostic power of the percent retention of the study meal at the 30-min interval.

Methods: We retrospectively reviewed 450 results of 4-h GES test. Among these reports, 320 (71%) were non-delayed, of which 122 (38%) had both a 30- and 60-min retention values recorded. Rapid emptying was defined as <70% retention at 30 min or <35% retention at 60 min. Statistical analysis using McNemar’s test was performed to evaluate the proportion of discordant pairs between these two time intervals and a p <0.0001 was determined to be significant.

Results: Of the 122 non-delayed GES reports with both 30- and 60-min retention values, 42 (34%) were classified as normal at both time points, and 46 (38%) met criteria as rapid at both intervals. Combined, the overall concordance was determined to be 72%. Additionally, 33 (27%) were classified as rapid at 30 min, but normal at 60 min, and one showed normal value at 30 min and rapid at 60 min. Among all GES reports, the 30-min retention value classified 65% of results as rapid whereas only 38% of this group were classified as rapid at 60 min. Using McNemar’s test, the proportion of discordant pairs was found to be significantly different between two times (p<.0001). The 30 min interval captured 99% of the rapid cases as defined by either decreased 30- or 60-min retention.

Conclusion: Our analysis of GES reports with both 30- and 60-min retention value demonstrated that: 1) 30-min interval data, diagnosed an additional 27% of patients with rapid emptying as compared to the 60-min value alone; 2) The addition of the 30-min retention data significantly increases the diagnostic power of GES to identify rapid gastric emptying.
TITLE: Clinical Relevance of 30-minute Retention Value in Diagnosing Rapid Gastric Emptying by a Scintigraphic Test.

(No Image Selected)
Purpose: Background: The 4-hour scintigraphy gastric emptying test (SGET) is considered as the "gold standard" to correctly identify dysmotility disorders such as functional dyspepsia, gastroparesis (GP) or dumping syndrome. The Gastric Emptying Breath Test (GEBT) is new methodology to overcome concerns about radiation exposure and to permit more frequent testing.

Our Aims were to:

1) Compare the results of these two gastric emptying test methodologies in patients with a suspected upper GI motility disorder;
2) Determine how interchangeable are the results of these tests in the diagnostic evaluation of patients.

Methods: Six diabetic patients with symptoms suggesting GP underwent gastric emptying testing with two methodologies over a 6 months period. The standardized SGET involved ingestion of a low fat (2%) isotope (Tech 99) labeled egg white meal consisting of 250 Kcal, with anterior and posterior gastric imaging obtained in the standing position at 0, 1, 2, 4 h after ingestion. Normal values of SGET are established as ≤ 60% retention of the study meal at 2 hour and ≤10% at 4 hour. The GEBT utilizes a test meal, containing 100 mg of the non-radioactive carbon [13C] isotope -Spirulina platensis in smoke-flavored scrambled egg mix with crackers (223 kcl). Breath samples collected at baseline and every 30 min for the next 3 hours were subsequently analyzed by Gas Isotope Ratio Mass Spectroscopy (GIRMS). Delayed GEBT was defined as T1/2 > 79 minute (mean+1SD) and 97min (mean+2SD).

Results: A total of 6 patients suspected to have diabetic GP [5F; mean age 49 (22-70); mean duration of GP 3(1-5) & diabetes -18(4-48) years, met the criteria for this analysis. All of these subjects had mild to moderate symptoms of GP and were receiving anti-emetics during testings and maintaining gluceses of <250 mg/dl. Mean time between the 2 tests was 4 months (1-6). All 6 of them were diagnosed with GP by GEBT (breath test) with mean T ½ of 140 (102-180) min. Only 2 (33%) were delayed by SGET (isotope). Interestingly, they both had the longest T ½ results by GEBT. Three (50%) had “normal” SGET with mean isotope retention of 26% at 2h and 4% at 4h. 1 of the 6 (17%) with GP by GEBT was characterized with “rapid” SGET (10% retention at 1h).

Conclusion: 1) We observed a substantial discrepancy between results obtained by scintigraphic and breath methods for measuring GE in diabetics with symptoms suggesting GP.

2) For now scintigraphic GET remains the “gold standard” for testing suspected upper GI motility problems while breath testing methodology is still evolving.
REVIEWER FLAGS: (none)
REVIEWER RECOMMENDATION CODE DESCRIPTION: None

REVIEWER COMMENTS:
Ashwin Ananthakrishnan: [No Comments]
Henry Parkman: [No Comments]
Kia Saeian: [No Comments]
Sachin Wani: [No Comments]
(no table selected)

TITLE: Scintigraphic and Breath Test Evaluations of Gastric Emptying in the Same Patients…What are the Results?
(No Image Selected)
Purpose: Vitamin B12 deficiency can result in a variety of disorders, including irreversible damage to the brain and nervous system. It has been speculated that the potent acid suppression from chronic proton pump inhibitors (PPIs) may be associated with low levels of vitamin B12. This study evaluated the frequency of vitamin B12 measurement in patients on chronic PPIs and the rate of vitamin B12 deficiency.

Methods: A retrospective medical record review was performed utilizing a multispecialty electronic health record. Consecutive patients on chronic PPIs during a 6 month period seen in an urban, academic gastroenterology clinic were included. There were no exclusion criteria. Patient gender, ethnicity and vitamin B12 levels were obtained. A database, maintaining patient confidentiality, was created. Statistical analysis was performed using Fisher exact test with statistical significance set at p<0.05. The study was approved by the university’s IRB.

Results: 234 records (88 men, 146 women; mean age 54.9 years) were reviewed. 54 patients were white, 81 were black, 26 were Hispanics, 13 were Asian and in 60 the ethnicity was not documented. 90 patients (38.5%) had vitamin B12 measured. There was no significant difference (p=0.1644) in vitamin B12 measurement based upon gender. Hispanics were less likely (p=0.0106) to have vitamin B12 measured than patients of other ethnicities. The average age of patients with vitamin B12 measurements was 59.6 years (95% confidence interval 56.8-62.4). Patients 60 years or greater were significantly more likely (p=0.0196) to have vitamin B12 measured than patients less than 60 years.

The mean vitamin B12 level was 739 pg/ml (95% confidence interval 655.1-822.9). One patient (1.1%) had low vitamin B12 (78 pg/ml; normal 211-926). The mean vitamin B12 level in men was 771.9 pg/ml and in women was 723.1 pg/ml. The mean vitamin B12 level in whites was 747.3 pg/ml, in Blacks was 695.3 pg/ml, in Hispanics was 671.8 pg/ml and in Asians was 563 pg/ml.

Conclusion: Low vitamin B12 is a proposed side effect of chronic PPI therapy. This study revealed that vitamin B12 was inconsistently measured in patients using chronic PPIs, with less than 40% of patients having vitamin B12 measured. There were significant differences in the rate at which vitamin B12 was measured based upon age (more frequently measured in patients >60) and ethnicity (less frequently measured in Hispanics). Additionally, only one patient had vitamin B12 deficiency. This study suggests that clinicians are unaware about the potential effect of chronic PPIs use on vitamin B12 levels. The results support that low vitamin B12 levels occur so rarely occur that measurement based upon chronic PPI use may not be necessary.
REVIEWER FLAGS: (none)
REVIEWER RECOMMENDATION CODE DESCRIPTION: None
REVIEWER COMMENTS:
Ashwin Ananthakrishnan: [No Comments]
Henry Parkman: [No Comments]
Kia Saeian: [No Comments]
Sachin Wani: [No Comments]
(no table selected)
TITLE: Chronic Proton Pump Inhibitor Use is not Associated with Vitamin B12 deficiency
(No Image Selected)
Purpose: Proton pump inhibitors (PPIs) target parietal cell hydrogen potassium ATPase to potently reduce gastric acid secretion. These medications are used to treat dyspepsia, gastroesophageal reflux disease, eosinophilic esophagitis, ulcer disease and hypersecretory states. Their chronic use has been associated with various side effects, including hypomagnesemia, decreased vitamin B12, and bone mineral density abnormalities. This study evaluated the assessment of serum magnesium, vitamin B12 and vitamin D in chronic PPI users based upon patient race / ethnicity.

Methods: A retrospective medical record review was performed utilizing a multispecialty electronic health record. Consecutive patients on chronic PPIs during a 6 month period seen in an urban, academic gastroenterology clinic were included. There were no exclusion criteria. Patient demographics, serum magnesium, vitamin B12 and vitamin D levels were obtained. A database, maintaining patient confidentiality, was created. Categorical variables were compared using Fisher exact test with statistical significance set at p<0.05. The study was approved by the university’s IRB.

Results: 234 records (88 men, 146 women; mean age 54.9 years) were reviewed. 54 patients were identified as white or Caucasian; 81 identified as black, African or African-American; 26 identified as Hispanics or Latino; 13 Asians and in 60 patients ethnicity was not documented. 110 patients (47%) had magnesium, 89 (38%) had vitamin B12 and 116 (49.6%) had vitamin D checked.

Serum magnesium was assessed in 7 of 26 (26.9%) Hispanics and 77 of 148 (50.0%) non-Hispanics. There was no significant difference (p=0.0339) in the rate of magnesium testing based on ethnicity.

Vitamin B12 was measured in 4 of 26 (15.4%) Hispanics and 62 of 148 (41.9%) non-Hispanics. There was a significant (p=0.0146) difference in the rate at which vitamin B12 was measured based upon ethnicity.

Vitamin D was measured in 6 of 26 (23%) Hispanics and 80 of 148 (54.1%) non-Hispanics. There was a significant (p=0.0050) difference in the rate at which vitamin D was measured based upon ethnicity.

Conclusion: Measuring magnesium, vitamin B12 and vitamin D in patients on chronic PPIs and providing repletion may mitigate adverse effects. This study revealed inconsistent measurement of these factors in all patients on chronic PPIs. Additionally, Hispanics were less likely to have assessment of magnesium, vitamins B12 and D. While the cause of this disparity is not clear, possible explanations include lack of testing, inadequate access to medical services (i.e. lab tests) and / or inadequate communication of recommendations. Further research is needed to identify and diminish ethnic disparities in medical care.
AVERAGE SCORE: 4.75
REVIEWER FLAGS: (none)
REVIEWER RECOMMENDATION CODE DESCRIPTION: None
REVIEWER COMMENTS:
Ashwin Ananthakrishnan: [No Comments]
Henry Parkman: [No Comments]
Kia Saeian: [No Comments]
Sachin Wani: [No Comments]
(no table selected)
TITLE: Hispanics on Chronic Proton Pump Inhibitors are Less Likely to be Monitored for Medication Side Effects
(No Image Selected)
Purpose: Proton pump inhibitors (PPIs) are among the most common medications prescribed in the U.S. Older patients are at increased risk for the development of side effects. Hypomagnesemia has been reported to occur. It is recommended that clinicians obtain magnesium levels prior to initiating prolonged PPI therapy. This study evaluated the impact of age upon the rate at which magnesium levels were obtained in patients on chronic PPIs.

Methods: A retrospective medical record review was performed utilizing a multispecialty electronic health record. Consecutive patients on chronic PPIs during a 6 month period seen in an urban, academic gastroenterology clinic were included. There were no exclusion criteria. Patient age, PPI dose, and serum magnesium levels were obtained. A database, maintaining patient confidentiality, was created. Categorical variables were compared using Fisher exact test with two-tailed p values and 95% confidence intervals computed for continuous variables. Statistical significance was set at p<0.05. The study was approved by the university’s IRB.

Results: 234 records (41 men, 74 women; mean age 54.9 years) were reviewed. 110 patients (46.8%) had magnesium measured. The average age of gastroenterology patients on PPI was 54.9 years. Among those who had documented measurement of serum magnesium, the average age was 59.2 (95% confidence interval 56.9 – 61.5) years. The average of patients without magnesium measurement was 50.5 (48.7 – 53.3) years.

There was a significant difference (p=0.001) in the rate at which the patients <55 years (39/104; 37.5%) and patients 55 years and older (77/130; 59.2%) had their magnesium assessed. Patients <60 years (55/139; 39.6%) were less likely (p=0.0003) than patients 60 years and older (61/95; 64.2%) to have had their magnesium measured. Patients 65 years and older (73/163; 44.8%) were more likely (p=0.0059) than patients <65 (43/67; 64.8%) to have a magnesium level obtained.

Conclusion: This study revealed that older patients were significantly more likely to have had evaluation of serum magnesium prior to or during PPI therapy. While there was not a progressive increase in magnesium measurement in chronic PPI users with increasing age, patients over 65 years old were 71% more likely to have magnesium checked than those under 55 years. The cause of this difference is not clear. Older patients may have more frequent or comprehensive medical attention, concomitant diuretic use, or cardiovascular disease, any of which may result in more frequent concern for electrolyte abnormalities. However, it is important that physicians are aware that all patients on chronic PPI therapy are at risk for hypomagnesemia and should have serum magnesium measured.
REVIEWER COMMENTS:
Ashwin Ananthakrishnan: [No Comments]
Henry Parkman: [No Comments]
Kia Saeian: [No Comments]
Sachin Wani: [No Comments]
(no table selected)

TITLE: Age Influences Physicians’ Evaluation of Magnesium Levels in Chronic PPI Users
(No Image Selected)
Purpose: Chronic proton pump inhibitors (PPI) are associated with an increased risk for hypomagnesemia. It has been suggested that low dose PPIs are less often associated with decreased magnesium levels. Recommendations have been published to obtain magnesium levels prior to initiating prolonged PPI therapy. This study evaluated the rate of magnesium measurement prior to or during chronic PPI use and assessed the influence of PPI dose and concomitant diuretic use.

Methods: A retrospective medical record review was performed utilizing a multispecialty electronic health record. Consecutive patients on chronic PPIs during a 6 month period seen in an urban, academic gastroenterology clinic were included. There were no exclusion criteria. Patient demographics, diagnosis, PPI dose, serum magnesium levels, and diuretic use were obtained. Low dose PPI was considered to be an over-the-counter regimen. High dose PPI was a prescribed regimen. A database, maintaining patient confidentiality, was created. Statistical analysis using Fisher exact test with significance set at p<0.05 was performed. The study was approved by the university's IRB.

Results: 234 records (41 men, 74 women; mean age 54.9 years) were reviewed. 110 patients (46.8%) had magnesium measured. 41 patients were on low-dose PPIs and 193 patients were on high-dose PPIs. 21 of 41 (51.2%) low dose PPI users had magnesium levels obtained. 95 of 193 (49.2%) patients on prescribed PPIs had magnesium levels obtained. There was no significant difference (p=0.845) in the rate at which low-dose and high-dose chronic PPI users had magnesium levels measured.

41 patients used diuretics. 30 of the 41 (73.2%) patients on diuretics had magnesium levels documented. In the 193 non-users of diuretics, 86 (44.6%) had magnesium measured. There was a statistically significant difference (p=0.001) in the rate of magnesium measurement in PPI users on diuretics compared to those not prescribed diuretics.

Conclusion: This study revealed that there was no difference in the rate of magnesium monitoring in patients on low-dose or high-dose PPIs. However, PPI users maintained on diuretics were significantly more likely to have magnesium measured than those not on diuretics. This may reflect greater physician awareness of diuretic-related electrolyte abnormalities. Alternatively, patients on diuretics may have more frequent contact with the medical system resulting in fortuitous measurement of electrolytes. Additionally, patients on diuretics may have additional cardiac comorbidities which demand close attention to electrolyte levels. Our data suggest that PPI prescribers may not be sufficiently aware of or adherent to recommendations regarding hypomagnesemia and PPI therapy.

CURRENT CATEGORY: B. Stomach
PRESENTATION TYPE: Oral or Poster
ACG Research Grant Support: No
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Commercial Products or Services: No
Initiated Research: Investigator
Financial Relationships: Not Applicable
FDA Approval: No
Designed Study: Investigator
Abstract Author: Investigator
AUTH DESIG: ACG Membership Status <font color="red">^</font>:
Timothy Dougherty : ACG Member
Adith Sekaran : ACG Non-Member
Marie Borum : ACG Member
AVERAGE SCORE: 5.25
TITLE: Diuretics and Not PPI Dosing Influence the Rate of Magnesium Measurement in Chronic PPI Users

(No Image Selected)
Duration of Proton Pump Inhibitor Therapy Influences Physicians’ Adherence to Recommended Monitoring of Magnesium

Timothy Dougherty
George Washington University
United States

Purpose: Long term use of proton pump inhibitors (PPIs) has been associated with various side effects. Clinicians have been advised to obtain magnesium levels prior to initiating prolonged PPI therapy. It has been speculated that clinicians may inconsistently evaluate for hypomagnesemia in patients on chronic PPIs. We evaluated the frequency of magnesium measurement in patients on long term PPIs and the effect of the duration of therapy upon measurement.

Methods: A retrospective medical record review was performed utilizing a multispecialty electronic health record. Consecutive patients on chronic PPIs during a 6 month period seen in an urban, academic gastroenterology clinic were included. There were no exclusion criteria. Patient demographics, PPI dose and duration, and serum magnesium levels were obtained. A database, maintaining patient confidentiality, was created. Categorical variables were compared using Fisher exact test with two-tailed p values and 95% confidence intervals computed for continuous variables. Statistical significance was set at p<0.05. The study was approved by the university’s IRB.

Results: 234 records (41 men, 74 women; mean age 54.9 years) were reviewed. 110 patients (46.8%) had magnesium measured. Among those whose magnesium was assessed, the mean duration of therapy was 25.9 months (95% confidence interval 22.1 to 29.7). Those whose magnesium was not measured had a mean duration of therapy of 17.9 (15.0 – 20.8) months. In the 148 patients treated with PPIs for <24 months, 64 (43.2%) had magnesium monitored. In the 80 patients treated with PPIs for 24 months or greater, 50 (62.5%) had magnesium determined. PPI users treated longer than 24 months were 44.7% more likely to have had magnesium measured. There was a statistically significant (p=0.0082) difference in the rate of magnesium testing in patients on chronic PPIs based upon the duration of therapy.

Conclusion: The mean duration of PPI therapy was significantly longer among those who had magnesium measurement. The association between longer duration of PPI therapy and higher rate of magnesium measurement may reflect clinicians’ growing awareness of PPI-related side-effects such as hypomagnesemia. Alternatively, patients treated longer may have other comorbid conditions and more contact with the health care system resulting in greater opportunity for measurement of serum electrolytes. Our data suggest that magnesium measurement increases with duration of PPI therapy. Further education of clinicians regarding the need for magnesium assessment in PPI users may improve adherence to such recommendations.
REVIEWER COMMENTS:
Ashwin Ananthakrishnan: [No Comments]
Henry Parkman: [No Comments]
Kia Saeian: [No Comments]
Sachin Wani: [No Comments]
(no table selected)

TITLE: Duration of Proton Pump Inhibitor Therapy Influences Physicians' Adherence to Recommended Monitoring of Magnesium
(No Image Selected)
TITLE: Factors Associated with Silent Peptic Ulcer Disease.

ABSTRACT BODY:

Purpose: Pain is commonly the initial symptom of peptic ulcer disease (PUD). However, silent PUD is also known to occur. The aim of this study is to investigate the factors associated with silent PUD.

Methods: Ten years of admission and discharge records (January 1997 – December 2006) were reviewed retrospectively, yielding 1115 community hospital patients, aged 18 to 101 years, with a final diagnosis of PUD made by endoscopy, radiology or surgery. Patients were stratified according to age and sex (Table 1) as well as the use of non-steroidal anti-inflammatory drugs (NSAIDs) including aspirin (Table 2). Data were abstracted and analyzed.

Results: Abdominal pain was absent in 301 (27%) of 1115 patients in our study. Painless presentation increased with age (Table 1), odds ratio (OR) 2.7, 95% confidence interval (CI): 2.0-4.1. Data about NSAIDs/aspirin intake was available in 440 patients (Table 2). NSAIDs intake also increased the incidence of painless presentation (OR 2.96, 95% CI: 1.05-5.32). Other factors associated with an increase in the incidence of silent PUD included: past history of PUD (OR 2.1, 95% CI: 1.35—3.0), smoking (OR 3.0, 95% CI: 1.9-4.1) and comorbidities (cardiovascular/cerebrovascular disease, diabetes, obesity) OR 1.71, 95% CI: 1.59-1.83.

Conclusion: In our study of 1115 PUD patients, 27% had silent presentation. Those patients were older, had more comorbidities and increased use of NSAIDs.

Table 1. Painless presentation: Number and % of total PUD patients in age groups

<table>
<thead>
<tr>
<th>Age (Yrs)</th>
<th>18-55 (n=502)</th>
<th>56-75 (n=357)</th>
<th>76-101 (n=256)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>30 (6%)</td>
<td>50 (14%)</td>
<td>56 (22%)</td>
</tr>
<tr>
<td>Female</td>
<td>25 (5%)</td>
<td>68 (19%)</td>
<td>72 (28%)</td>
</tr>
</tbody>
</table>

AUTH DESIG: ACG Membership Status <font color="red">*</font>:

Abbasi Akhtar: ACG Member
Aslam Akhtar: ACG Non-Member

AVERAGE SCORE: 4.25

REVIEWER COMMENTS:

Ashwin Ananthakrishnan: [No Comments]
Henry Parkman: [No Comments]
Kia Saeian: [No Comments]
Sachin Wani: [No Comments]
Table 2. NSAID use in relation to silent PUD

<table>
<thead>
<tr>
<th>Age (Yrs)</th>
<th>18-55</th>
<th>56-75</th>
<th>76-101</th>
</tr>
</thead>
<tbody>
<tr>
<td>NSAID use</td>
<td>Total (% Silent)</td>
<td>Total (% Silent)</td>
<td>Total (% Silent)</td>
</tr>
<tr>
<td>Male</td>
<td>50 (10%)</td>
<td>86 (24%)</td>
<td>64 (28%)</td>
</tr>
<tr>
<td>(Total = 200)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>65 (12%)</td>
<td>96 (26%)</td>
<td>79 (30%)</td>
</tr>
<tr>
<td>(Total = 240)</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

**TITLE:** Factors Associated with Silent Peptic Ulcer Disease.

(No Image Selected)
ABSTRACT BODY:

Purpose: Proton pump inhibitors (PPIs) target parietal cell hydrogen potassium ATPase to potently reduce gastric acid secretion. These medications are used to treat dyspepsia, gastroesophageal reflux disease, eosinophilic esophagitis, ulcer disease and hypersecretory states. Clinicians are advised to obtain magnesium levels prior to initiating prolonged therapy. This study evaluated the frequency at which magnesium levels were obtained prior to or during chronic PPI therapy.

Methods: A retrospective medical record review was performed utilizing a multispecialty electronic health record. Consecutive patients on chronic PPIs during a 6 month period seen in an urban, academic gastroenterology clinic were included. There were no exclusion criteria. Patient demographics, diagnosis, PPI dose and duration, serum magnesium levels, and diuretic use were obtained. A database, maintaining patient confidentiality, was created. Statistical analysis using Fisher exact test with significance set at p<0.05 was performed. The study was approved by the university's IRB.

Results: 234 records (41 men, 74 women; mean age 54.9 years) were reviewed. 110 patients (46.8%) had magnesium measured. There was no significant difference (p=0.59) in measurement based upon gender. Clinicians obtained magnesium in 77 of 130 (59%) patients age 55 years and older compared with 39 of 104 (37.5%) younger patients. There was a significant difference (p=0.001) in the rate of magnesium measurement based upon age.

62 of 106 (58.5%) patients maintained on PPIs for 18 months or greater were screened for hypomagnesemia compared to 52 of 124 (41.9%) patients on more brief therapy. There was a significant difference (p=0.011) in the rate of magnesium measurement based upon the duration of therapy.

30 of the 41 (73.2%) patients on diuretics had magnesium level documented. In the 193 non-users of diuretics, 86 (44.6%) had magnesium assessment. There was a significant difference (p=0.001) of magnesium measurement in PPI users on diuretics compared to those not prescribed diuretics.

Conclusion: Hypomagnesemia is associated with PPI use and clinicians are advised to check serum magnesium prior to initiation of long-duration PPI therapy. In this study, fewer than half of the patients had a documented magnesium level. Factors associated with a significantly increased rate of magnesium measurement included older age, longer duration of therapy, and concomitant diuretic therapy. Diuretic use was most strongly associated with magnesium testing. It is not clear to what degree PPI, rather than diuretic therapy, influenced this practice. Our data suggest that clinicians inconsistently adhere to recommendations regarding electrolyte monitoring and PPI use.
Adith Sekaran : ACG Non-Member
Ahmed Maher Abdelfattah : ACG Non-Member
Ma'en Al-Dabbas : ACG Non-Member
Matthew Chandler : ACG Member
Marie Borum : ACG Member

AVERAGE SCORE: 5.5
REVIEWER FLAGS: (none)
REVIEWER RECOMMENDATION CODE DESCRIPTION: None

REVIEWER COMMENTS:
(no table selected)

TITLE: Physicians Inconsistently Adhere to Guidelines Recommending Periodic Evaluation of Magnesium Levels in Chronic PPI Users
(No Image Selected)
Purpose: Obtaining tissue for a diagnosis in submucosal gastric masses can be challenging. Few studies have examined the actual diagnostic yield of EUS-FNA for cytologic diagnosis of gastric GIST tumors. We aimed to determine the yield of positive cytology by immunohistochemistry (IHC) in patients undergoing EUS examination with FNA of submucosal lesions suspicious for GIST, as well as possible factors contributing to positive cytology.

Methods: We conducted a retrospective electronic chart review of patients referred to a single tertiary care center for endoscopic ultrasound over a 4.5 year period. Patient charts were abstracted for baseline patient characteristics, findings on EUS exam, and subsequent management.

Results: During the study period 118 patients were referred for evaluation of a presumed submucosal gastric lesion. For suspected GISTs, 34 cases were performed on 31 patients (3 repeat cases). The mean lesion size in maximal diameter was 39.5 mm (range 11-120 mm). FNA was attempted in 32 of 34 cases. We used 22 gauge needles in 28 of 32 cases (88%) and the mean number of passes was 2.3 (range 1-4). For initial cases, cytology was positive for GIST in 23/29 patients (79.3%) using IHC. There was also 1 suspicious lesion (spindle cells only) and 5 nondiagnostic specimens (17.2%). Repeat FNA was performed in 3 patients with spindle cells found in all 3 (2 suspicious lesions, one GIST by IHC). Positive cytology with IHC was not influenced by lesion size (p=0.4) or number of passes (p=NS). Forceps biopsies were not attempted. Twenty of 31 patients were lost to follow-up after their procedures. Nine underwent surgery, with confirmation of GIST in 8/9 and reversal of diagnosis to leiomyoma in 1 patient. All of the GIST lesions were found to be low-grade on histologic analysis.

Conclusion: The diagnostic yield of FNA for gastric GIST tumors is high regardless of size or number of FNA passes. Size of the lesion does not correlate with positive cytology. Repeat examination with FNA does add to the diagnostic yield.
Purpose: Proton pump inhibitors (PPIs) are associated with an increased risk for the development of fractures. It is recommended that users of PPIs who are at risk for osteoporosis have vitamin D levels and bone density evaluations. However, it is uncertain if vitamin D monitoring and bone densitometry are consistently obtained. This study evaluated the frequency at which vitamin D levels and bone densitometry measurements were obtained in patients on chronic PPIs.

Methods: A retrospective medical record review was performed utilizing a multispecialty electronic health record. Consecutive patients on chronic PPIs during a 6 month period seen in an urban, academic gastroenterology clinic were included. There were no exclusion criteria. Patient gender, vitamin D level and dual energy x-ray absorptiometry (DEXA) scan were obtained. A database, maintaining patient confidentiality, was created. Statistical analysis was performed using Fisher exact test with statistical significance set at p<0.05. This study was approved by the university's IRB.

Results: 234 records (88 men, 146 women; mean age 54.9 years) were reviewed. 116 patients (49.6%) had vitamin D measured. 76 of 145 (52.4%) women and 40 of 89 (44.9%) men had vitamin D levels obtained. There was no significant difference (p=0.345) in the rate of vitamin D measurement based upon gender. 62 patients (26.5%) had DEXA scans. 50 women (34.5%) and 12 men (13.5%) had a DEXA scan. Women were more likely (p=0.004) than men to have a DEXA scan. 32 (50%) patients who had DEXA scans were found to have osteopenia.

52 of the 60 (83.9%) patients who had DEXA scans also had vitamin D levels obtained. 64 of the 172 (37.2%) patients who did not have DEXA scans had vitamin D levels obtained. Patients in whom DEXA scans were performed were significantly more likely (p<0.0001) to have vitamin D levels obtained compared to those who did not have DEXA scans.

Conclusion: Vitamin D levels and bone densitometry monitoring are recommended for patients on chronic PPIs who are at increased risk for osteoporosis. This study revealed that approximately half of the patients maintained on PPIs had vitamin D levels obtained and that DEXA scans were infrequently performed. Patients who had DEXA scans more often had vitamin D levels. Women had DEXA scans more often than men. In patients in whom bone densitometry measurements were obtained, 50% were found to have osteopenia. It is important to recognize that patients on chronic PPIs may be at increased risk for fractures and that bone health is monitored. Efforts should be made to enhance awareness of the fracture risk associated with PPI therapy.
REVIEWER RECOMMENDATION CODE DESCRIPTION: None

REVIEWER COMMENTS:
Ashwin Ananthakrishnan: [No Comments]
Henry Parkman: [No Comments]
Kia Saeian: [No Comments]
Sachin Wani: [No Comments]

(no table selected)

TITLE: DEXA Scans and Vitamin D Levels are Inconsistently Obtained in Patients on Chronic Proton Pump Inhibitors
(No Image Selected)
ABSTRACT BODY:

**Purpose:** Proton pump inhibitors (PPIs) are commonly prescribed medications. Chronic use of PPIs has been associated with bone fractures. The risk is enhanced with increased patient age and longer duration of therapy. Monitoring and supplementing vitamin D levels may reduce fracture risk. This study evaluated the rate of vitamin D measurement based upon patient age and the duration of PPI therapy.

**Methods:** A retrospective medical record review was performed utilizing a multispecialty electronic health record. Consecutive patients on chronic PPIs during a 6 month period seen in an urban, academic gastroenterology clinic were included. There were no exclusion criteria. Patient age, gender, PPI dose and duration and vitamin D level were obtained. A database, maintaining patient confidentiality, was created. Statistical analysis was performed using Fisher exact test with two-tailed p-values and 95% confidence intervals computed for continuous variables. Statistical significance set at p<0.05. This study was approved by the university’s IRB.

**Results:** 234 records (88 men, 146 women; mean age 54.9 years) were reviewed. 116 (49.6%) had vitamin D levels checked. There was no significant difference (p=0.345) in vitamin D measurement based upon gender. The mean age of patients with vitamin D measured was 60.6 years (confidence interval 58.2-63.1) and 49.2 years (48.6-51.7) in those with vitamin D not measured (p=1.16x10^-9).

There was a significant difference (p<0.0001) in the rate at which vitamin D was checked in patients 60 years and older (65 of 90; 68.4%) compared to patients less than 60 years (51 of 139; 36.7%). There was a significant difference (p<0.0001) in the rate of vitamin D measurement in patients treated 24 months and longer (56 of 80; 70%) compared to those treated less than 24 months (60 of 154; 39%).

**Conclusion:** Chronic use of PPIs has been associated with increased fracture risk. The risk is increased with longer duration of therapy and increased patient age. Supplementation of low vitamin D levels may mitigate the risk of fractures. This study revealed that there was inconsistent measurement of vitamin D, with only half of chronic PPI users having a vitamin D level documented in their medical record. Patients on PPIs 24 months or longer and patients who were 60 years and older more frequently had vitamin D measured. These results suggest that physicians recognize the factors that increase fracture risk in patients maintained on PPIs. However, increased efforts are needed to encourage monitoring of vitamin D levels in all patients on chronic PPI therapy.
TITLE: Monitoring of Vitamin D in Chronic PPI Users is Influenced by Patient Age and Duration of Therapy
(No Image Selected)
Purpose: Proton Pump Inhibitors (PPI) use is very common, and relatively safe, but not completely benign and recently there is increasing concern with their overuse. FDA has recently issued warnings for PPI induced C. difficile associated diarrhea and hypomagnesaemia. Increased risk of acute renal failure, pneumonia, osteoporotic bone fractures, B12 and iron malabsorption along with adverse drug interactions are also well documented. Inappropriate use predisposes patients to unwarranted risks in addition to adding to health care cost. We did a study to estimate the inappropriate use of PPI during hospital stay, prior to admission and at discharge at a university affiliated teaching hospital (Rochester General Hospital, RGH) in Rochester, NY.

Methods: Retrospective chart review of all adult patients admitted to our hospital during the month of January 2012 who were treated with >1 dose of PPI during hospitalization. The documented indications for all PPI prescriptions including those initiated in the hospital (Hospital Rx) and those started prior to hospitalization (Home Rx) were compared with the recommended indications from FDA and ACG (American College of Gastroenterology).

Results: Out of 153 patients reviewed, 50% were male. Mean age was 68 years. Most common reason for Hospital Rx was continuation of home medications (38%), followed by GI prophylaxis (18%). Most common indication for Home Rx was GERD (56%). Only 41% of Hospital Rx were truly indicated and only 34% of Home Rx were indicated (Fig 1). No side effects were identified in this small sample. However, inappropriate use led to an estimated extra yearly cost burden of $ 80,134 to the hospital (based on pharmacy accrual cost for Hospital Rx) and $ 289,075 to the health system (based on prescription costs for Home Rx).

Conclusion: Inappropriate PPI use is common (60%) at RGH, which is consistent with the data available from literature review. Appropriate use can decrease patient harm and save the hospital $80k/year along with decreasing outpatient health care cost by $290k/ year. Further, we have recently developed and implemented guidelines for PPI use during hospital stay along with stewardship program to minimize improper use. Strategies to improve PPI Rx with usage guidelines should be further studied.
(no table selected)
**TITLE:** PPIs: Permanent Prescriptions without Indication: Should they be added to water supply?

**IMAGE CAPTION:** Appropriate Use of PPIs

Appropriate Use of PPIs

**IMAGE CAPTION:** Appropriate Use of PPIs
Symptom Severity and Quality of Life in Dyspeptics and Their Relationship to Gastric Emptying

Neal Patel
Mayo Clinic Arizona, United States

Purpose: The diagnosis of gastroparesis may be suspected in patients who complain of postprandial fullness, early satiety, nausea, vomiting and/or bloating. These symptoms are, however, nonspecific and conflicting reports exist regarding the ability of symptoms to predict the presence of gastroparesis.

Our aim, therefore, was to evaluate the relationships among dyspeptic symptoms, symptom severity, quality of life and gastric emptying results in order to quantify symptoms in gastroparesis and relate the severity to clinical factors and quality of life.

Methods: Data from medical histories, symptom (GCSI) and quality of life (PAGI-QOL, SF-12) questionnaires, and 4-hour gastric emptying scintigraphy (GES) were obtained from consecutive patients referred for GES to evaluate dyspeptic symptoms. Logistic regression was used to further evaluate associations with abnormal gastric emptying after controlling for age, gender and BMI.

Results: A total of 266 patients were enrolled (195 females; mean age 49.1±17.6 yrs). Approximately 75% met Rome III criteria for functional dyspepsia. Gastric emptying was delayed in 33.1% at 2 hrs and 28.2% at 4 hrs; the delay was mild in 13.5%, moderate in 5.6% and severe in 9%. Dyspeptic symptoms were measured before the GES and at 2 hr and 4 hr timepoints during the GES. Interestingly, symptom severity decreased during the GES (GCSI total score at baseline, 2 hr and 4 hr: 2.44±1.01, 1.56±1.05, and 1.59±1.08, respectively). Similar decreases were seen in the GCSI symptom subscores (postprandial fullness/early satiety, nausea/emesis, bloating); however, no group difference was seen in relation to normal or abnormal gastric emptying. Weak correlations were identified between dyspepsia symptom severity (for total score and postprandial fullness/early satiety and nausea/emesis subscores but not bloating subscore) and the severity of gastric emptying delay. The PAGI-QOL total score was lower in the mild (2.32±1.01) and moderately (2.32±0.99) delayed gastric emptying groups compared to the normal (2.88±1.10) emptying group; however, the difference was statistically significant in the mildly delayed group only (p=0.014). There were no significant differences in either the SF12 mental or physical composite scores irrespective of the degree of delay in emptying. Results of the logistic regression analysis will be available for the meeting.

Conclusion: In dyspeptic patients referred for GES, a weak correlation between dyspeptic symptoms and degree of delay in gastric emptying was found; however, no important differences in symptoms or quality of life were seen when those with normal and abnormal gastric emptying were compared.
AVERAGE SCORE: 4
REVIEWER FLAGS: (none)
REVIEWER RECOMMENDATION CODE DESCRIPTION: None
REVIEWER COMMENTS:
Ashwin Ananthakrishnan: [No Comments]
Henry Parkman: [No Comments]
Kia Saeian: [No Comments]
Sachin Wani: [No Comments]
(no table selected)
TITLE: Symptom Severity and Quality of Life in Dyspeptics and Their Relationship to Gastric Emptying
(No Image Selected)
Purpose: Gastric cancer is a leading cause of cancer-related deaths worldwide. Recent studies have reported different incidence and survival trends of cardia (CAR) vs. non-cardia gastric cancer (NCAR). While racial/ethnic differences in gastric cancer are known, it is unclear whether these disparities are similar among both CAR and NCAR. The objective of this study is to evaluate racial disparities in incidence and long term survival of CAR and NCAR.

Methods: Using the Surveillance, Epidemiology, and End Results 1992-2009 dataset, race-specific incidence of CAR vs. NCAR was evaluated with stratification by sex, year of diagnosis, tumor stage, and geography. Long term survival was evaluated using Kaplan Meier methods, log rank testing, and multivariate Cox proportional hazards models.

Results: Overall, men had significantly higher incidence rates than women among both CAR and NCAR. While the incidence of CAR and NCAR were similar among men, the incidence of NCAR among women was more than double that of CAR (2.5 vs. 0.9 per 100,000/year, p<0.001). The significantly higher incidence of NCAR compared to CAR was seen among all race groups with the exception of whites, where the incidence of NCAR and CAR were similar (4.9 vs. 5.0 per 100,000/year, p=0.17). Among patients with CAR, whites had the highest incidence (5.0 per 100,000/year), whereas Asians had the highest incidence among NCAR patients (15.3 per 100,000/year). Overall, 5-year survival for CAR was poorer than NCAR (18.7% vs. 27.2%, p<0.001). The poorer survival of CAR compared to NCAR was seen among both males and females, and among all race groups. However, Asians had the highest 5-year survival compared to all other race groups for both CAR (33.6% vs. 25.3% (white) vs. 25.6% (black) vs. 26.7% (Hispanic), p<0.001) and NCAR (23.5% vs. 18.4% vs. 17.1% vs. 17.8%, p<0.001). Multivariate Cox proportional hazards models inclusive of sex, age, race, tumor stage, treatment, year of diagnosis, and geography demonstrated poorer survival in CAR compared to NCAR (HR 1.08, 95% CI 1.05-1.11, p<0.001). Compared to whites, poorer survival was seen among blacks (HR 1.07, 95% CI 1.03-1.11, p<0.001), and higher survival was seen among Asians (HR 0.84, 95% CI 0.81-0.87, p<0.001).

Conclusion: Sex-specific and race-specific disparities in CAR and NCAR incidence and survival exist. Women and minorities have significantly higher incidence of NCAR compared to CAR. Whites and Asians had the highest incidence of CAR and NCAR, respectively. In the multivariate Cox model, Asian race was predictive of improved survival, whereas black race predicted poorer survival. Compared to NCAR, CAR was associated with poorer survival.
TITLE: Racial/Ethnic Disparities in Cardia vs. Non-Cardia Gastric Cancer Incidence and Survival in the United States (No Image Selected)
Purpose: It has been suggested that gastric adenocarcinoma in young patients has different clinical profiles and more aggressive tumor biology than conventional gastric adenocarcinoma. The aim of this study was to identify clinicopathological features and clinical outcomes of patients with gastric adenocarcinoma aged 30 years or younger.

Methods: From January 2004 to December 2010, 207 patients between 18 and 30 years old (median 28 years, interquartile range [IQR] 25–29 years) diagnosed with gastric adenocarcinoma at Asan Medical Center, were reviewed retrospectively. Patients were divided into two groups according to the resectability of gastric cancer, then clinicopathological characteristics and clinical outcomes were analyzed.

Results: Clinicopathological characteristics showed predominance of female (n=126, 60.9%), undifferentiated tumors (n=196, 94.7%), diffuse-type cancers (n=98, 81.0%), and advanced gastric cancer (n=137, 66.2%). The overall resectability rate was 70.0 % (n=145) and resectable patients showed higher levels of albumin (P <0.001) and lower rate of advanced gastric cancer (P=0.035) than unresectable patients in multivariate analysis. The overall median follow-up period in all patients was 45 months (IQR 18.0-83.0 months) and 86 patients (41.5 %) died with median 14 survival months (IQR 8.0-26.0 months). Among 145 resectable patients, 26 patients (17.9%) died with median 28.5 months (IQR 18.8-38.3) and 60 patients (96.8%) died in 62 unresectable patients with median 10.5 months (IQR 5.6-18.0). Multivariate analysis showed that unresectability, larger tumor size, presence of lymphovascular invasion, and elevated carcinoembryonic antigen levels significantly increased the risk of death. Significant prognostic factors for survival in resectable patients included tumor size (< 4cm), tumor location in lower third of the stomach, subtotal gastrectomy, lower grade of tumor stage, and no evidence of lymphovascular invasion.

Conclusion: Gastric adenocarcinomas in young patients aged 30 years or younger have unique clinicopathological features such as female dominance, advanced stage cancer, and undifferentiated histologic type. Early detection in a resectable state and subsequent complete resection without lymphovascular invasion could increase survival period in gastric cancer of young age patients.
TITLE: Clinical characteristics and outcomes of gastric cancer in patients with 30 years of age or younger
(No Image Selected)
Purpose: Introduction: IgG4-related disease (IgG4-RD) has been recognized as a novel lymphoproliferative disorder characterized by enlargement of involved organs, elevated level of IgG4 and abundant infiltration of IgG4-positive plasma cells. However, few studies have reported a concomitant malignant tumor with this disease. Here, we present a case of gastric cancer accompanied with IgG4-RD. Case: A 61-year male from Northeast China presented to the hospital with a two-month history of abdominal distension, pruritus, jaundice and a 25-pound weight loss. He denied the use of alcohol, tobacco, or illicit drugs. He had yellow skin and sclera and a swollen submandibular lymph node. There was mild epigastric tenderness on abdominal examination. Laboratory testing revealed elevated total-bilirubin (179 μmol/L), alkaline phosphatase (487 unit/L), amylase (183 unit/L), lipase (127 unit/L) and IgG4 (17.5 g/L). CT showed diffuse thickening of bile duct wall (gallbladder wall, common hepatic duct and common bile duct walls) and diffuse enlargement of pancreas. Endoscopic biopsy from pylorus confirmed moderately differentiated adenocarcinoma of the stomach and a large amount of IgG4-positive plasmacytes in the tumor stroma. Endoscopic ultrasound-guided fine needle aspiration (EUS-FNA) of the pancreas confirmed IgG4-related autoimmune pancreatitis. The patient underwent radical subtotal gastrectomy for gastric cancer combined with cholecystectomy plus T-tube drainage. Immunohistochemical stain for IgG4 demonstrated a large number of IgG4-positive plasma cells (>10/high power field) in the surgically resected specimen of cholecystitis. The patient was discharged home 7 days after surgery and received a dose of prednisone of 40 mg/day for 4 weeks. At 4-week follow-up he felt no discomfort and his swollen pancreas and the thickened bile duct wall returned to normal size. Liver function tests normalized. The dosage of steroid was gradually tapered to a maintenance dosage of 10 mg/day. Discussion: A recent report indicates the standardized incidence ratio for malignancies in IgG4-RD is higher than that for the general population. The malignant tumors in IgG4-RD including lung cancer, colon cancer and lymphoma have been recognized so far. We reported a gastric cancer which probably developed from IgG4 related gastric disease and was found accidentally at the EUS-FNA. Therefore, a careful examination of IgG4-RD is required to rule out any other malignant tumors.

Methods: no

Results: no

Conclusion: no
TITLE: A Case of Gastric Cancer Complicated with IgG4-Related Disease
(No Image Selected)
TITLE: Development of post-lung transplant Gastroesophageal Reflux Disease (GERD) in Diabetic patients

PRESENTER: Rushikesh Shah

PRESENTER (INSTITUTION ONLY): SUNY Upstate Medical University

PRESENTER (COUNTRY ONLY): United States

ABSTRACT BODY:

Purpose: GERD is highly prevalent disease in lung-transplant patients. Though many suggested hypothesis, clear reasons for this high prevalence are still unknown. There are no studies which has assesses role of diabetes in development of post-lung transplant GERD.

Methods: Medical records were reviewed for all patients currently established at our Heart-Lung transplant center who have had lung transplantation. Patients who were diagnosed with GERD before transplant were excluded from the study. As per our inclusion criteria 132 patients were enrolled in study. Patients were divided in two groups – Diabetics (52%) Vs. non Diabetics (48%). Incidence of post-transplant GERD was obtained for both groups. Incidence of other post-transplant GI complications such as colorectal polyp, colorectal complications (such as bleeding, ischemia, perforation) were also measured between both groups.

Results: Among diabetics 51.47% patients developed GERD post lung transplant as compared to 31.25% patients in non-diabetic group (p=0.01). In diabetic group 17.44% patient had established diagnosis of gastroparesis as opposed to 11.11% in non-diabetic group (p=0.22). Colorectal polyp was detected in 48% in diabetic group as compared to 30% in non-diabetic group (p=0.19). Other colorectal complications were diagnosed in 32% patients from diabetic group as compared to 18% in non-diabetic group (0.16).

Conclusion: Incidence of post-transplant GERD is significantly higher amongst diabetics. It may offer a risk independent of gastric motility. Though not statistically significant, incidence of colorectal polyps and complications were also higher in diabetics.

CURRENT CATEGORY: B. Stomach

PRESENTATION TYPE: Poster Only

ACG Research Grant Support: No

Supported by Industry Grant: No

Commercial Products or Services: No

Initiated Research: Investigator

Financial Relationships: No

FDA Approval: No

Designed Study: Investigator

Abstract Author: Investigator

AUTH DESIG: ACG Membership Status <font color="red">*</font>:

Rushikesh Shah : ACG Non-Member
Vaidehi Kaza : ACG Non-Member
Prabhakar Swaroop : ACG Member

AVERAGE SCORE: 5.75

REVIEWER FLAGS: (none)

REVIEWER RECOMMENDATION CODE DESCRIPTION: None

REVIEWER COMMENTS:

Ashwin Ananthakrishnan: [No Comments] | Henry Parkman: [No Comments] | Kia Saeian: Do not mention if all patients were assessed by pH study or other means for GERD prior to transplant. | Sachin Wani: [No Comments] (no table selected)

TITLE: Development of post-lung transplant Gastroesophageal Reflux Disease (GERD) in Diabetic patients

IMAGE CAPTION:
The efficiency of gastric screening by the ABC method using the combination assay of serum anti-Helicobacter pylori IgG antibody and the serum pepsinogen levels

Shinya Kodashima  
Department of Gastroenterology, The University of Tokyo  
Japan

Purpose: The present investigation was made to assess the efficiency of gastric screening by the ABC method which allows stratification of the risk for the development of gastric cancer into four groups based on the results of the two serological tests, anti-Helicobacter pylori (Hp) IgG antibody titer and the pepsinogen (PG) I and II levels.

Methods: Hp and PG levels were measured in the total number of 61,106 asymptomatic individuals (about 14,000 per year; majority participants checked every year) at a work place in Tokyo as a primary screening between April 2007 and March 2011. Subjects were classified into 1 of 4 groups; Group A [Hp (-) PG (-)], Group B [Hp (+) PG (-)], Group C [Hp (+) PG (+)], and group D [Hp (-) PG (+)], respectively. Group A were excluded from the secondary endoscopic examination, and Group B, C, and D were recommended to undergo it every 3 years, 2 years, and every year, respectively. We examined how the ABC method contributed to the reduction in the number of individuals who were advised to undergo the secondary endoscopic examination.

Results: In a total of 61,106 participating individuals, the ratio of Group A, B, C, and D were 74.2%, 15.5%, 9.2%, and 1.2%, respectively. Based on the time of recent endoscopic examination, 8,199 were advised to undergo the secondary endoscopic examination, and it amounted to 13.4% of all the participating individuals. The ratio of Group A was increasing gradually (70.6% in 2007, 72.7% in 2008, 75.8% in 2009, and 77.9% in 2010), and the increasing ratio of Group A was estimated about 3% per year. 4,658 individuals underwent the secondary endoscopic examination, and gastric cancer was detected in 24 patients, which corresponded to 0.04% of all participants and to 0.52% of those with endoscopic examination. Although 5 patients were diagnosed with the advanced gastric cancers, it was the first time for all of 5 advanced cancers to have this screening program for reasons such as mid-career hiring.

Conclusion: The ABC method drastically reduced the number of the secondary endoscopic examination for gastric screening for employees at a working place. The increasing ratio of Group A is expected to contribute to a further reduction of cost and manpower caused by endoscopic examination, and makes this screening program more efficient in the future.
TITLE: The efficiency of gastric screening by the ABC method using the combination assay of serum anti-Helicobacter pylori IgG antibody and the serum pepsinogen levels
(No Image Selected)
Endoscopic Assessment and Management of Fundic Gland Polyps - Can Frequent Biopsy and Polypectomy Be Avoided?

Ibrahim Habib

Purpose: Current ASGE guidelines recommend that all gastric polyps either be biopsied or removed. The vast majority of gastric polyps are fundic gland polyps (FGP), however, with no malignant potential. We sought to determine whether gastroenterologists (GI) could correctly identify a FGP, and to determine what the current practice is in the GI community at large regarding these lesions.

Methods: A questionnaire was sent via email to approximately 3500 randomly selected members of The American College of Gastroenterology. The first question asked the participant to identify an endoscopic image of a classic FGP in a free text field. A survey was then given regarding the participant’s management of such polyps.

Results: There were 589 responses. The FGP was correctly identified by 455 of 589 (77%). The remaining survey questions and responses were as follows: 1) If you saw this polyp at endoscopy in a patient without a history of PPI use, would you: a) 41% remove it b) 50% biopsy it c) 9% do nothing. 2) If this was seen during an endoscopy in a patient with chronic PPI use, would you: a) 27% remove it b) 51% biopsy it c) 21% do nothing. 3) If this patient had multiple similar polyps, would you: a) 8% biopsy one polyp b) 52% biopsy a few larger polyps c) 2% remove one d) 27% remove a few of the larger polyps e) 3% remove all polyps f) 8% do nothing. 4) If this patient had an endoscopy in the past with documented biopsy demonstrating fundic gland polyps, would you: a) 3% biopsy one polyp b) 22% biopsy a few larger polyps c) 1% remove one d) 12% remove a few of the larger polyps e) 2% remove all polyps f) 60% do nothing.

Conclusion: FGPs account for 78% of all gastric polyps in the United States. FGPs either occur sporadically, usually in patients with a history of proton pump inhibitor (PPI) use, or are found in patients with extremely rare hereditary polyposis syndromes. When FGPs occur sporadically or in patients who use PPIs, they have no malignant potential. FGPs have characteristic physical attributes making them easy to identify. They are usually small nodular lesions with a smooth surface. Our hypothesis was that most practicing GIs can readily identify FGPs on endoscopy, precluding the need for biopsy. Our results confirmed this, with approximately 77% of GIs correctly identifying the FGP. However, most would still remove or biopsy it and, if multiple, remove or biopsy at least one. At our institution, the cost (to Medicare) of an EGD with polypectomy is approximately $300 more than a simple EGD. There are further costs associated with subsequent pathologic evaluation. We feel that the GI community can benefit from updated and specific guidelines regarding management of these completely benign lesions, which can lead to substantial cost savings.

CURRENT CATEGORY: B. Stomach
PRESENTATION TYPE: Oral or Poster
ACG Research Grant Support: No
Supported by Industry Grant: No
Commercial Products or Services: No
Initiated Research: Investigator
Financial Relationships: Not Applicable
FDA Approval: No
Designed Study: Investigator
Abstract Author: Investigator

AUTH DESIG: ACG Membership Status <font color="red">*</font>
Ibrahim Habib : ACG Non-Member
Asif Lakha : ACG Member
Alan Shapiro : ACG Member
AVERAGE SCORE: 4.75
REVIEWER FLAGS: (none)
REVIEWER RECOMMENDATION CODE DESCRIPTION: None

REVIEWER COMMENTS:
Ashwin Ananthakrishnan: [No Comments]  
Henry Parkman: [No Comments]  
Kia Saeian: Too much irrelevant commentary in the conclusions not related to the study itself  
Sachin Wani: [No Comments]  

(Title selected)

TITLE: Endoscopic Assessment and Management of Fundic Gland Polyps - Can Frequent Biopsy and Polypectomy Be Avoided?

(No Image Selected)
Purpose: Glasgow-Blatchford score (GBS) is the most popular tool used in patients with non-variceal upper gastrointestinal bleed (NVUGIB) to predict clinical intervention, i.e. blood transfusion and endoscopic or surgical control of bleeding. However, its utility for predicting endoscopic intervention alone is questionable. The purpose of our study was to examine various clinical parameters, including GBS, for their ability to predict high-risk lesions or the need for intervention on an upper endoscopy done for NVUGIB.

Methods: All patients with a NVUGIB from 8/2010 to 12/2012, at a large community teaching hospital were retrospectively analyzed for the presence of high-risk lesions or interventions done on an upper endoscopy. Patients with normal or no endoscopy were excluded. Clinical, laboratory, endoscopic variables were collected and GBS, clinical Rockall and AIMS-65 scores were computed. Univariate and multivariate analyses were conducted to examine if any of the variables individually or collectively such as GBS could predict the presence of high-risk lesions or the need for intervention on endoscopy.

Results: A total of 117 patients (57.3% men) were identified as having NVUGIB. Overall, 41% of the patients had high-risk lesions and 36% had endoscopic intervention. Many patients had acute kidney injury or chronic kidney disease with 12 on chronic hemodialysis. Patients on dialysis were excluded in GBS, blood urea nitrogen (BUN) and creatinine calculations. The mean GBS was not significantly different in patients with and without high-risk lesions (9.9 v 10, p=0.89) or in those needing endoscopic intervention (10.3 v 9.8, p=0.53). Similarly, clinical Rockall and AIMS-65 scores were also not able to identify patients with high-risk lesions or needing endoscopic intervention. However, BUN-creatinine ratio was found to be significantly different for high-risk lesions (mean=15.9 v 11.7, p=0.03) and for endoscopic intervention (mean=34.2 v 11.8, p=0.01). These differences were also significant on multiple logistic regression (p<0.01). At a BUN-creatinine ratio < 11, no patients had high-risk lesions (p=0.02) or needed endoscopic intervention (p=0.03).

Conclusion: Unlike other prediction scores, BUN-creatinine ratio was found to be a significant predictor for finding high-risk lesions and endoscopic intervention in patients with NVUGIB. In addition, BUN-creatinine ratio can be used in patients with abnormal renal function, who are not on dialysis. Future endoscopic intervention prediction scores need to consider incorporating BUN-creatinine ratio, especially for patients with acute and chronic kidney disease.

CURRENT CATEGORY: B. Stomach
PRESENTATION TYPE: Oral or Poster
ACG Research Grant Support: No
Supported by Industry Grant: No
Commercial Products or Services: No
Initiated Research: Investigator
Financial Relationships: No
FDA Approval: No
Designed Study: Investigator
Abstract Author: Investigator

AUTH DESIG: ACG Membership Status <font color="red">^</font>: Abhishek Gulati : ACG Non-Member Rohit Nathan : ACG Non-Member Anand Kumar : ACG Member Harish Iyer : ACG Member Philip Katz : ACG Member
AVERAGE SCORE: 2.5
TITLE: BUN-creatinine ratio does what Glasgow-Blatchford or other prediction scores do not: predicts high-risk lesions and endoscopic intervention for non-variceal upper GI bleed
Intestinal Metaplasia of the Stomach Is Associated with an Increased Risk of Gastric Cancer in a Western Population

Wissam Bleibel

University of Virginia

United States

Purpose: Gastric carcinoma (GCA) is believed to arise via a process that includes chronic inflammation, atrophy, intestinal metaplasia, and finally dysplasia. Aim: To study the natural history of intestinal metaplasia of the stomach (IMS) and its associated risk of GCA in a Western population.

Methods: A hospital database and electronic medical records were used to select adult patients who had EGD with gastric biopsy showing IMS from 1993 to 2012 at an academic tertiary-care center in Virginia. Patients with preexisting GCA and those diagnosed with GCA within 6 months following the index EGD were excluded. A control group included patients who had EGD with a normal gastric biopsy from 2002 to 2012. Pathology reports of all patients were reviewed. Patient demographics and H. Pylori (HP) infection status were collected. ICD-9 codes from an institutional database were used to diagnose development of GCA. Last follow-up was either the last encounter at our institution or date of documented death.

Results: 14 of 675 patients (2.1%) in the IMS group developed GCA, as compared to 1 patient of 1273 (0.1%) in the control group (p<0.0001) (Tables 1 and 2). Patients with IMS were older (61 vs. 44 years) and had longer follow-up (5.3 vs. 3.1 years). Only 17.5% of IMS patients had HP on biopsy. On univariate analysis both IMS (HR 15.7, 95% CI 2.00-122.81, p<0.009) and HP infection (HR 3.4, 95% CI 1.02-1.099, p<0.05) were associated with increased risk for GCA. On multivariate analysis, of these factors: IMS, HP, age, sex, and race, only IMS was associated with an increased risk for GCA (HR 11.23, 95% CI 1.35-93.40, p<0.025) (Figure 1). The mean time interval between diagnoses of IMS and GCA was 4 years (SD 3.5 years).

Conclusion: Western patients with IMS are at increased risk for GCA, and this risk may be increased by 11-fold in those with IMS. Given the relatively short time in which GCA develops in these patients following diagnosis of IMS, EGD for GCA surveillance at regular intervals should be considered.
Table 1. Characteristics of patients with and without intestinal metaplasia of the stomach.

<table>
<thead>
<tr>
<th>.</th>
<th>IMS Positive</th>
<th>IMS Negative</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>675</td>
<td>1273</td>
<td>N/A</td>
</tr>
<tr>
<td>Age, years</td>
<td>61.3, SD 13.9</td>
<td>44.5, SD 21.2</td>
<td>&lt;0.0001</td>
</tr>
<tr>
<td>Male gender</td>
<td>48.6%</td>
<td>43.5%</td>
<td>0.5</td>
</tr>
<tr>
<td>Race</td>
<td>White 67.3% Black 25.2% Others 7.6%</td>
<td>White 81% Black 12% Others 6.9%</td>
<td>0.7</td>
</tr>
<tr>
<td>HP Positive</td>
<td>17.5%</td>
<td>0%</td>
<td>0.001</td>
</tr>
<tr>
<td>Subsequent GCA</td>
<td>2.1%</td>
<td>0.1%</td>
<td>&lt;0.0001</td>
</tr>
<tr>
<td>Time interval to GCA, years</td>
<td>3.99, SD 3.5</td>
<td>2.1, SD 0</td>
<td>0.61</td>
</tr>
<tr>
<td>Follow-up time, years</td>
<td>5.3, SD 4.1</td>
<td>3.1, SD 2.0</td>
<td>&lt;0.0001</td>
</tr>
</tbody>
</table>

Table 2. Characteristics of patients with and without subsequent gastric cancer.

<table>
<thead>
<tr>
<th>.</th>
<th>GCA Positive</th>
<th>GCA Negative</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>15</td>
<td>1933</td>
<td>N/A</td>
</tr>
<tr>
<td>Age, years</td>
<td>63.1, SD 6.7</td>
<td>50.3, SD 20.6</td>
<td>&lt;0.0001</td>
</tr>
<tr>
<td>Male gender</td>
<td>60%</td>
<td>45.2%</td>
<td>0.25</td>
</tr>
<tr>
<td>Race</td>
<td>White 80% Black 20% Others 0%</td>
<td>White 76.3% Black 16.5% Others 7.2%</td>
<td>0.74</td>
</tr>
<tr>
<td>IMS Positive</td>
<td>93.3%</td>
<td>34.2%</td>
<td>&lt;0.0001</td>
</tr>
<tr>
<td>HP Positive</td>
<td>26.7%</td>
<td>5.9%</td>
<td>0.001</td>
</tr>
</tbody>
</table>

Title: Intestinal Metaplasia of the Stomach Is Associated with an Increased Risk of Gastric Cancer in a Western Population

Figure 1. Kaplan-Meier curve demonstrating gastric-cancer-free survival (Y-axis) over time (X-axis) for patients with intestinal metaplasia of the stomach (green) vs. those without (blue).
**IMAGE CAPTION:** Figure 1. Kaplan-Meier curve demonstrating gastric-cancer-free survival (Y-axis) over time (X-axis) for patients with intestinal metaplasia of the stomach (green) vs. those without (blue).
Purpose: The lifestyle changes accompanied by economic growth have influenced disease patterns in Korea. The aim of this study was to evaluate the changing patterns of peptic ulcer disease (PUD) over the past two decades in Korea.

Methods: Serial multi-center surveys on lifestyles of peptic ulcer patients immediately after esophagogastroduodenoscopy (EGD) were performed in 1988-1989, 1996-1997, and 2011-2012 in 8 institutes affiliated with The Catholic University of Korea (Seoul St. Mary’s Hospital, Yeouido St. Mary’s Hospital, Uijeongbu St. Mary’s Hospital, Bucheon St. Mary’s Hospital, St. Paul’s Hospital, Incheon St. Mary’s Hospital, St. Vincent’s Hospital, Daejeon St. Mary’s Hospital). These surveys included over 20 questionnaires on lifestyle of the patients and descriptions on EGD findings. Each surveys enrolled over 1000 patients and endoscopic findings were also analyzed.

Results: Trends of peptic ulcer disease were summarized in Table 1. The proportion of gastric ulcer over duodenal ulcer has been markedly increased over the past two decades. The ratio of female over male in PUD has been increased. The proportion of drug-induced PUD has also been increased but H. pylori-related PUD tends to be declining. Mean age of the patients are increasing during this period.

Conclusion: Given that chronic diseases such as ischemic heart diseases and degenerative joint diseases are increasing with longevity, this trend will be continued for a while and gastroenterologists should be alert to the complications of drugs prescribed by other physicians and educate other physicians on gastrointestinal adverse events of such drugs.
<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>Male : Female (%)</td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>GU</td>
<td>77.3 : 22.7</td>
<td>70.0 : 30.0</td>
<td>53.9 : 46.1</td>
</tr>
<tr>
<td>DU</td>
<td>75.6 : 24.4</td>
<td>77.3 : 22.7</td>
<td>67.4 : 32.6</td>
</tr>
<tr>
<td>Combined</td>
<td>81.0 : 19.0</td>
<td>81.1 : 18.9</td>
<td>81.4 : 18.6</td>
</tr>
<tr>
<td>Mean Age (±SD; years)</td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>GU</td>
<td>50.3±14.4</td>
<td>52.9±13.0</td>
<td>58.4±14.2</td>
</tr>
<tr>
<td>DU</td>
<td>39.6±12.7</td>
<td>42.8±13.0</td>
<td>52.7±14.7</td>
</tr>
<tr>
<td>Combined</td>
<td>47.9±13.0</td>
<td>50.0±13.0</td>
<td>56.8±13.1</td>
</tr>
<tr>
<td>Proportions of the disease (%)</td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>GU</td>
<td>41.5</td>
<td>44.3</td>
<td>55.5</td>
</tr>
<tr>
<td>DU</td>
<td>51.4</td>
<td>41.4</td>
<td>33.5</td>
</tr>
<tr>
<td>Combined</td>
<td>7.1</td>
<td>14.3</td>
<td>11.1</td>
</tr>
<tr>
<td>Drug-induced lesion (%)</td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>GU</td>
<td>31.9</td>
<td>37.7</td>
<td>44.6</td>
</tr>
<tr>
<td>DU</td>
<td>24.1</td>
<td>22.9</td>
<td>31.6</td>
</tr>
<tr>
<td>Combined</td>
<td>29.8</td>
<td>21.5</td>
<td>38.5</td>
</tr>
<tr>
<td>H. pylori positivity (%)</td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>GU</td>
<td>N/A</td>
<td>69.8</td>
<td>49.5</td>
</tr>
<tr>
<td>DU</td>
<td>N/A</td>
<td>85.4</td>
<td>60.9</td>
</tr>
<tr>
<td>Combined</td>
<td>N/A</td>
<td>85.3</td>
<td>67.6</td>
</tr>
<tr>
<td>Current smoker (%)</td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td></td>
<td>GU</td>
<td>DU</td>
<td>Combined</td>
</tr>
<tr>
<td>------------</td>
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<td>----------</td>
</tr>
<tr>
<td>Alcohol drinkers (%)</td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>GU</td>
<td>68.1</td>
<td>58.9</td>
<td>69.0</td>
</tr>
<tr>
<td>DU</td>
<td>64.9</td>
<td>63.3</td>
<td>62.4</td>
</tr>
<tr>
<td>Combined</td>
<td>46.4</td>
<td>54.7</td>
<td>64.1</td>
</tr>
</tbody>
</table>

GU, gastric ulcer; DU, duodenal ulcer; Combined, combined gastric and duodenal ulcer; N/A, not available

**TITLE:** Trends of Peptic Ulcer Disease in Korea: Serial Multi-center Surveys Over Two Decades (No Image Selected)
Purpose: There are three options of diagnostic methods, rapid urease test (RUT), histology, and tissue culture for Helicobacter pylori (H. pylori) when encountering patients with peptic ulcer disease (PUD) during esophagogastroduodenoscopy (EGD). On the other hand, substantial prevalence of Clarithromycin (CAM) resistant H. pylori is the issue in deciding the first line regimen. We can know CAM sensitivity of H. pylori beforehand if we choose the tissue culture as a diagnostic test by which CAM sensitivity test can be done. The aim of this study was to determine the effect of prevalence of CAM resistant H. pylori for cost-effective of the treatment of H. pylori.

Methods: Decision analytic model was made for the patients who were diagnosed as PUD during diagnostic EGD in Japan. Time horizon was until the success of H. pylori eradication or the end of second regimen. Expected value of cost and effectiveness were calculated for each diagnostic test, RUT, pathological findings, and tissue culture including CAM sensitivity test. Costs of EGD, histology, RUT, antibiotics and administration were estimated from national health insurance data in Japan. The effectiveness was measured by success rate of H. pylori eradication. We used sensitivity and specificity of each diagnostic tests, success rate of H. pylori eradication by the first regimen (Lansoprazole 30mg bid, Amoxicillin 750mg bid, and CAM 200mg bid for one week) and the second regimen (Lansoprazole 30mg bid, Amoxicillin 750mg bid, and Metronidazole 250mg bid for one week) in the patients with CAM sensitive or resistant H. pylori. All probabilities were obtained from past literatures or expert opinion. We did not include side effects of drug in the costs and did not take into account the third regimen for H. pylori in our model. We performed sensitivity analysis using plausible range of probability of CAM resistant H. pylori, such as 19%, 30%, 47%, and 80%.

Results: If the prevalence of CAM resistant H. pylori is 30%, RUT is the least expensive and the most effective diagnostic test. However, if the prevalence of CAM resistant H. pylori increases to 65%, tissue culture is less expensive than RUT. If the prevalence of CAM resistant H. pylori increases to more than 65%, the incremental cost-effective ratio of RUT was 1400-16000 yen (14-160 dollars if one dollar is 100 yen) per one case of H. pylori eradication compared with culture including CAM sensitivity test.

Conclusion: RUT is the best choice for diagnosing H. pylori during EGD in terms of cost-effectiveness with present prevalence of CAM resistant H. pylori. The tissue culture with test of CAM sensitivity would be considered only if the frequency of CAM resistant H. pylori increased remarkably like to 56%.
REVIEWER RECOMMENDATION CODE DESCRIPTION: None

REVIEWER COMMENTS:
Ashwin Ananthakrishnan: [No Comments]
Henry Parkman: [No Comments]
Kia Saeian: [No Comments]
Sachin Wani: [No Comments]

(no table selected)

TITLE: Cost-effective analysis of diagnostic test for Helicobacter pylori in case of peptic ulcer disease during esophagogastroduodenoscopy
(No Image Selected)
CONTROL ID: 1745254
TITLE: test
PRESENTER: Drake Remorray
PRESENTER (INSTITUTION ONLY): 
PRESENTER (COUNTRY ONLY): United States
ABSTRACT BODY:
Purpose: test
Methods: test
Results: test
Conclusion: test
CURRENT CATEGORY: B. Stomach
PRESENTATION TYPE: Oral or Poster
ACG Research Grant Support: No
Supported by Industry Grant: No
Commercial Products or Services: No
Initiated Research: Investigator
Financial Relationships: No
FDA Approval: No
Designed Study: Investigator
Abstract Author: Investigator
AVERAGE SCORE: No average score available
REVIEWER FLAGS: (none)
REVIEWER RECOMMENDATION CODE DESCRIPTION: None
REVIEWER COMMENTS:
[No Reviewers assigned]
(no table selected)
TITLE: test
(No Image Selected)
Rifabutin, Omeprazole, Alinia and Doxycycline therapy for prior treatment failure Helicobacter Pylori (HP) population - A randomized open label clinical pilot study - ROAD Trial

PRESENTER: Patrick Basu
PRESENTER (INSTITUTION ONLY): Columbia School of Physicians and Surgeons
PRESENTER (COUNTRY ONLY): United States

ABSTRACT BODY:

Purpose: HP infection is a global problem with a large spectrum of clinical syndromes like Dyspepsia, Ulcer, MALT and Gastric Cancer. WHO considers HP a carcinogen. Multi bacterial regiments have been established to eradicate H Pylori. Treatment failure remains a clinical challenge due to microbial resistance, recrudescence or reinfection. Bacterial Genomic resistance confers a series of anti microbials with species specificity. This study evaluates the efficacy of a novel regiment against treatment failure population

Methods: seventy six patients (n=76) were recruited with treatment failure with Metronidazole (Mtz), Clarithromycin (Cltx), Amoxicillin (Amx), Levofloxacin (Lvx), Tetracycline (Tcx), with Bismuth, in non sequential therapy. Group A (n=36)- Mtz 30/36 (83%), Amx 29/36(80%), Cltx 30/36 (83%) and Bismuth 23/36 (64%), Tcx 21/36 (58%), NTZ 6/36 (16%), Dox 6/36(16%). Group B (n= 40): Mtz 31/40 (77%), Cltx 30/40(75%), Amx 32/40(80%), Tcx 13/40 (32%), Lvx 9/40(22%), NTZ 9/40 (22%), Dox 9/40 (22%), Bismuth 21/40(52%).

Group A received oral Rifabutin 300 mg QD, Alinia 500 mg BID, Dox 200 mg nightly and Omeprazole 40 mg prior to breakfast for 10 days. Group B received oral Macrodantin (McD) 300mg daily, Dox 200mg nightly, Alinia (Ntz) 500 mg bid and Omeprazole 40 mg for 10 days. All underwent endoscopy with four quadrant biopsies. H Pylori pre and post stool antigen. Group A- 9/36 (25%) Intestinal Metaplasia(IM), Antral erosion 3/36 (8%), Duodenitis 7/40(17%). GroupB: 11/40 (28%) IM, Duodenal ulcer 2/40 (5%), Peptic ulcer 4/40 (10%). Exclusion: Pregnancy, Recent Clostridium Difficile infection, NSAIDs, Bismuth, PPI or any antibiotics use within two months, Gastric Cancer, any hypersensitivity to study drugs or recent chemotherapy.

Results: Group A- ROAD 29/36 (72%). stopped for itching 2/36 (8%) and 1/36(3%) atypical chest pain. 1/36(3%) took for 7 days. Side events in Group A: 11/36 (30%) Nausea, 3/36(8%) constipation, 4/36 (11%) headache, 2/36 (5%) diarrhea, 2/36 (5%) Vomiting, 1/36(3%) Dizziness, 1/36(3%) Abdominal pain, 1/36 (3%) Palpitations, and no skin rash. Group B-MOAD 21/40(52%) eradicated. Stopped: 4/40(10%). Side events- 13/40 (32%) Nausea, 2/40(5%) Dysgeusia, 3/40(7%) vomiting, 4/40(10%) Constipation, 2/40(5%) Diarrhea, 3/40(7%) Headache, 2/40(5%) dizziness, 2/40(5%) atypical Chest pain, 3/40(7%) abdominal pain, 2/40(5%) itching no skin rash and 2/40(5%) palpitations.

Conclusion: Optimal eradication of H Pylori is aimed to prevent MALT or gastric Cancer over time with significant morbidity and QOL. ROAD therapy has exceeded the eradication rate over MOAD in prior treatment experienced or failed therapy with symptoms. Larger trial to validate

CURRENT CATEGORY: B. Stomach
PRESENTER TYPE: Oral or Poster
ACG Research Grant Support: No
Supported by Industry Grant: No
Commercial Products or Services: No
Initiated Research: Investigator
Financial Relationships: Not Applicable
FDA Approval: No
Designed Study: Investigator
Abstract Author: Investigator

AUTHOR: ACG Membership Status <font color="red">^</font>:
Patrick Basu : ACG Member
Niraj Shah : ACG Non-Member
Md Rahaman : ACG Non-Member
Ravi Siriki : ACG Non-Member
S. Farhat : ACG Non-Member

AVERAGE SCORE: 4.75
No statistical analysis section, no sample size calculation
Poorly written abstract
Should be considered for poster

(title)
Rifaxitin, Omeprazole, Alinia and Doxycycline therapy for prior treatment failure Helicobacter Pylori (HP) population - A randomized open label clinical pilot study -ROAD Trial

(No Image Selected)
ABSTRACT BODY:

Purpose: Initial management of Peptic ulcer disease (PUD) involves attaining hemodynamic stability until endoscopy can be performed for diagnosis and treatment. In patients who have persistent or recurrent bleeding despite two endoscopic attempts at therapy, surgery or interventional radiologic studies are indicated to control the bleeding and achieve hemostasis.

Case Presentation

87 year-old female with past medical history of dementia, perforated duodenal ulcer, admitted for vomiting of bright red blood and bloody diarrhea. She was hemodynamically unstable. After Initial resuscitation endoscopy showed two gastric ulcers, a visible vessel, but no sign of active bleeding. Following index endoscopy, the patient had recurrent bleeding, which persisted despite multiple transfusions and two more attempts at endoscopic treatment. She was deemed a poor surgical candidate and interventional radiology was consulted for left gastric artery embolization. A left gastric artery embolization was performed, with successful termination of bleeding. Following embolization, she was hemodynamically stable and did not require any more transfusions.

DISCUSSION

Management of emergent non-variceal upper GI bleeding is associated with high morbidity and mortality, particularly in elderly patients with other co-morbidities. Peptic ulcer disease is the most common cause of massive upper GI bleeding, and bleeding is responsible for 40% of deaths attributable to peptic ulcer disease. Initial management of upper GI bleeding associated with hemodynamic instability includes medical stabilization of patient followed by upper endoscopy for diagnosis and treatment. In cases where endoscopy fails to control non-variceal upper GI bleeding, transcatheter angiographic embolization (TAE) or surgical intervention to control the source of bleeding is indicated.

TAE has been shown to be as effective as surgery for non-variceal upper GI bleeding refractory to endoscopic management, with a similar mortality rate, and a lower rate of complications. The two major complications of TAE are re-bleeding and bowel wall ischemia or infarction. While re-bleeding rates can be as high as 30%, repeat angiography is successful in half of these patients. Bowel wall ischemia is rare, given rich collateral blood supply of stomach.

References:

Methods: N/A

Results: N/A

Conclusion: N/A

CURRENT CATEGORY: B. Stomach

PRESENTATION TYPE: Oral or Poster

ACG Research Grant Support: No
Supported by Industry Grant: No
Commercial Products or Services: No
Initiated Research: Investigator
Financial Relationships: Not Applicable
FDA Approval: No
Designed Study: Investigator
Abstract Author: Investigator

AUTH DESIG: ACG Membership Status <font color="red">*</font>:
Abu Hurairah : ACG Non-Member
Mougnyan Cox : ACG Non-Member

**AVERAGE SCORE:** No average score available

**REVIEWER FLAGS:** (none)

**REVIEWER RECOMMENDATION CODE DESCRIPTION:** None

**REVIEWER COMMENTS:**
[No Reviewers assigned]
(no table selected)

**TITLE:** Management of massive non-variceal upper gastrointestinal bleeding in high-risk surgical candidate after failed endoscopy

(No Image Selected)
Purpose: Sixty-five years or older person accounts for 23% of the population in Japan. Therefore, a triple therapy which consists of amoxicillin (AMPC), clarithromycin (CAM), and a proton pump inhibitor (PPI) [PPI/AC] has been commonly used for the first eradication regimen of Helicobacter pylori (H. pylori) in many elderly patients. The aim of study was to evaluate the influence of CAM resistance in H. pylori positive elderly patients treated with PPI/AC regimen.

Methods: The subjects were 132 H. pylori positive patients consist with 26 patients aged over 65 years and 106 patients aged under 65 years. H. pylori culture and CAM susceptibility test were performed using gastric biopsy specimens. All patients were treated with PPI/AC regimen. Eradication was confirmed with $^{13}$C-urea breath test.

Results: The eradication rate were 83.3% (110/132) for all patients, 76.9% (20/26) for aged over 65 years group, 84.9% (90/106) for aged under 65 years group, respectively. CAM-resistant rate for H. pylori were 22.0% (29/132) for all patients, 30.8% (8/26) for aged over 65 years group, 19.8% (21/106) for aged under 65 years group, respectively.

Conclusion: Since CAM-resistant rate for H. pylori in elderly patients are higher than in young patients, the eradication rate in elderly patients are lower than in young patients.
Daytime Intragastric pH With Esomeprazole 20 mg: New Comparative Analyses With Other Proton Pump Inhibitors Omeprazole 20 mg, Lansoprazole 15 mg, and Pantoprazole 20 mg

Purpose: In untreated patients with gastroesophageal reflux disease (GERD), the major burden of high rates of acid reflux and frequent heartburn symptoms occurs during waking hours. Using data from previously published studies that evaluated the 24-hour control of intragastric pH by esomeprazole and other proton-pump inhibitors (PPIs), we conducted new analyses focusing on intragastric pH in the 14-hour awake period for esomeprazole 20 mg and over-the-counter (OTC) doses of other PPIs.

Methods: In one double-blind and three open-label randomized, crossover studies, intragastric pH was monitored for 24 hours on day 5 of treatment. In this post-hoc analysis, acid control with OTC PPIs was reassessed for the 14-hour daytime period. Mean percentage of time with pH >4 was estimated for each study using a linear mixed-effect model that included treatment, treatment period, and treatment sequence as fixed effects and subject nested with treatment sequence as a random effect. Using the same model, geometric mean ratios were estimated based on log-transformed individual values.

Results: The results are presented in the Table.

Conclusion: During the period of daytime food-stimulated acid secretion and postprandial reflux, esomeprazole 20 mg provided acid control for a significantly greater average portion of the time vs other PPIs at OTC doses. As the majority of reflux occurs during the day, we postulate that better control of daytime intragastric pH should translate to improved treatment of acid-related inflammation and sensitization of the esophagus and thereby better-directed symptomatic control of frequent heartburn.

REFERENCES:

CURRENT CATEGORY: B. Stomach
PRESENTATION TYPE: Oral or Poster
ACG Research Grant Support: No
Supported by Industry Grant: Yes
Extra Info: This research was sponsored by AstraZeneca, which entered into an agreement with Pfizer for the over-the-counter rights for NEXIUM® (esomeprazole magnesium).

Commercial Products or Services: No
Initiated Research: Investigator
Financial Relationships: Yes

FDA Approval: Yes
Designed Study: Investigator
Abstract Author: Investigator

AUTH DESIG: ACG Membership Status <font color="red">*</font> Philip Katz : ACG Non-Member
## Table. Intragastric Acid Control During the 14-hour Daytime Period With Esomeprazole 20 mg vs Other PPIs

<table>
<thead>
<tr>
<th>Population</th>
<th>Treatment</th>
<th>Mean (95% CI) Time With pH &gt;4, %</th>
<th>Geometric Mean (95% CI) Ratio, Esomeprazole 20 mg/Comparator</th>
</tr>
</thead>
<tbody>
<tr>
<td>GERD, N=36&lt;sup&gt;1&lt;/sup&gt;</td>
<td>Esomeprazole 20 mg</td>
<td>61.9 (53.9-69.9)&lt;sup&gt;†&lt;/sup&gt;</td>
<td>1.45 (1.14-1.85)&lt;sup&gt;†&lt;/sup&gt;</td>
</tr>
<tr>
<td></td>
<td>Omeprazole 20 mg</td>
<td>51.7 (43.7-59.7)</td>
<td></td>
</tr>
<tr>
<td>GERD, N=38&lt;sup&gt;2&lt;/sup&gt;</td>
<td>Esomeprazole 20 mg</td>
<td>55.2 (49.2-61.1)&lt;sup&gt;‡&lt;/sup&gt;</td>
<td>2.50 (2.01-3.11)&lt;sup&gt;‡&lt;/sup&gt;</td>
</tr>
<tr>
<td></td>
<td>Pantoprazole 20 mg&lt;sup&gt;a&lt;/sup&gt;</td>
<td>28.0 (22.0-34.0)</td>
<td></td>
</tr>
<tr>
<td>Healthy subjects, N=37&lt;sup&gt;3&lt;/sup&gt;</td>
<td>Esomeprazole 20 mg</td>
<td>51.2 (45.6-56.8)&lt;sup&gt;‡&lt;/sup&gt;</td>
<td>1.69 (1.46-1.97)&lt;sup&gt;‡&lt;/sup&gt;</td>
</tr>
<tr>
<td></td>
<td>Lansoprazole 15 mg</td>
<td>31.5 (25.9-37.0)</td>
<td></td>
</tr>
<tr>
<td>Healthy subjects, N=26&lt;sup&gt;4&lt;/sup&gt;</td>
<td>Esomeprazole 20 mg</td>
<td>55.8 (43.5-68.0)&lt;sup&gt;*&lt;/sup&gt;</td>
<td>1.89 (1.05-3.37)&lt;sup&gt;*&lt;/sup&gt;</td>
</tr>
<tr>
<td></td>
<td>Lansoprazole 15 mg</td>
<td>45.2 (33.0-57.5)</td>
<td></td>
</tr>
</tbody>
</table>

<sup>a</sup>Pantoprazole 20 mg is available as an OTC medication in some countries outside the US. 
<sup>*</sup>P<0.05; <sup>†</sup>P<0.01; <sup>‡</sup>P<0.001 vs comparator.

**TITLE:** Daytime Intragastric pH With Esomeprazole 20 mg: New Comparative Analyses With Other Proton Pump Inhibitors Omeprazole 20 mg, Lansoprazole 15 mg, and Pantoprazole 20 mg

(No Image Selected)
ABSTRACT BODY:

**Purpose:** In patients with a first eradication failure, a second therapy still fails in 2–3% of cases in Japan. Although levofloxacin (LVFX) is often used for rescue therapy worldwide, LVFX resistance rate is reportedly high in Japan. Sitafloxacin (STFX) is a newly developed quinolone, it is another new quinolone antibacterial agent with anticipated efficacy due to its low MIC for H. pylori, even in LVFX-resistant strain. To compare LVFX and STFX rescue regimens in patients with two consecutive *H. pylori* eradication failure.

**Methods:** Patients, in whom first treatment with proton pump inhibitor (PPI)–clarithromycin–amoxicillin (AMPC) and a second trial with PPI–AMPC–metronidazole had failed, received 7 days of treatment. They were administered LVFX-based therapy combined with rabeprazole 10 mg (t.i.d.), AMPC 500 mg (t.i.d.), and LVFX 500 mg (o.d.) for 10 days or STFX-based therapy combined with rabeprazole 10 mg (t.i.d.), AMPC 500 mg (t.i.d.), and STFX 100 mg (b.i.d.) for 10 days. Cure rates were evaluated by the ^13^C-urea breath test (UBT) 8 weeks after the end of therapy. The cutoff value for negative UBT was less than 2.5%.

**Results:** Twenty-two patients received LVFX group, and 10 STFX group. All the patients returned for follow-up. Compliance in the both group was 100%.

Side effects in the LVFX and STFX groups were reported in 13.6% and 30% of the cases, respectively. Mainly including diarrhea and soft stool; none of them were severe. Per-protocol cure rates and intention-to-treat cure rates were 77.3% in the LVFX group, and 90% in the STFX group.

**Conclusion:** After two previous *H. pylori* eradication failures, a 10-day triple STFX-based rescue regimen is more effective than the same regimen with LVFX in Japan.
Purpose: Gastric antral vascular ectasia (GAVE) is an infrequent cause of upper gastrointestinal bleeding constituting 4% of non variceal bleeds. Therapeutic options are limited which includes medical, endoscopic and surgical treatment. We present this case series to evaluate the use of radio-frequency ablation (RFA) as a plausible option.

Methods: We conducted a retrospective analysis of patients who underwent RFA for GAVE lesions at our institution. 1 patient underwent antrectomy two days after the 1st session of RFA and was therefore excluded from this study. 1 patient received first session of RFA recently and his post treatment follow up is not complete. For rest of the patients, their demographics; number of RFA sessions; type of catheter(s) used; total number of ablations; and other treatment options used, Hemoglobin (Hb) level, total number of blood transfusions required, and total number of days spent in the hospital due to anemia secondary to GAVE lesions before and after therapy were recorded.

Results: A total of 5 (2 male, 3 female) patients were included with a mean age of 81 years. Since 1 patient does not have complete follow up after treatment, data pertaining him is not used to make calculations. Both HALO90 and HALO ultra were used. An average of 1.8 sessions (range 1-4) and 65 ablations (17-181) were applied per patient. After the completion of RFA, mean Hb increased from 9.13 gm/dl (7.6-11.6 gm/dl) to 11.05 gm/dl (9.3-11.75 gm/dl) , the mean number of transfusions decreased from 41.25 units/patient (0-158) to 8.4 (0-10) and none of the patients were admitted to the hospital again with GI bleed or anemia after RFA. 2 patients had no previous therapy while the other 3 had received multiple APC sessions (3-13) prior to RFA. Only 1 patient received APC (2 sessions) after RFA.

Conclusion: RFA using HALO ablation catheter has been utilized safely in Barrett’s Esophagus for ablation of metaplastic epithelium. Its use in GAVE lesions was first shown by Gross et al in 2007. Our case series evaluates the use of RFA in all the patients of GAVE lesions including those not responding to Argon Plasma Coagulation (APC). APC is the most studied and used form of treatment for GAVE but it has a small surface area of 12 mm2 and hence has a small focal area of coverage. HALO90 and HALO Ultra have surface area of 260 mm2 and 520 mm2 respectively and hence can be used to ablate larger surface areas. In our experience we found that all patients had an improvement in their Hb levels, blood transfusion requirements decreased markedly and no one was admitted to hospital again with GI bleed or anemia. Our study shows benefits of RFA in GAVE lesions and this must be studied in a randomized controlled trial.
TITLE: Radio Frequency Ablation Using HALO Ablation Catheter for Gastric Antral Vascular Ectasia – a Case Series From a Community Hospital

(No Image Selected)
The High Incidence Of Treatment Failure In Eradicating Helicobacter Pylori Infection In Individuals With Intellectual Disabilities And Developmental Delay (IDDD) From A Long Term Care Facility.

PRESENTER: Tariq Hassan
PRESENTER (INSTITUTION ONLY): Digestive Disease Specialists
PRESENTER (COUNTRY ONLY): United States

ABSTRACT BODY:
Purpose: Helicobacter pylori (H Pylori) infection is a major cause of chronic gastritis and peptic ulcer disease and is considered a risk factor for gastric mucosa associated lymphoid tissue (MALT) lymphoma. According to the Maastricht III consensus report H pylori eradication is recommended for patients with gastroduodenal ulcer disease, atrophic gastritis and MALT lymphoma. Treatment however is not successful in 10-35% of patients; with failure to eradicate H pylori infection occurring for several reasons including non-compliance to therapy and antibiotic resistance. While most studies have been done in mentally healthy individuals, there is limited data on the eradication rates in institutionalized individuals with intellectual disabilities and developmental delay (IDDD). We have previously demonstrated a higher incidence of H pylori infection in individuals with IDDD. The purpose of this study was to evaluate the eradication rates among these patients compared to a general reference population.

Methods: Between 2005 and 2012, 24 individuals living in a long term state facility for IDDD underwent upper endoscopy for various indications by a group of endoscopists. During the same time period 7,012 patients underwent upper endoscopy at an outpatient centre by the same group of endoscopists located in the same city and were considered the reference population. Among patients with IDDD, 20 (83%) were H pylori positive, while 840 (12%) of patients from the reference population were positive. Patients were treated with clarithromycin 500 mg PO BID and amoxicillin 1000 mg PO BID for 14 days and omeprazole 20 mg PO BID for 14 days then daily for 14 days. H pylori eradication was confirmed via C 13 breath test or stool H pylori antigen.

Results: The mean age of the IDDD and reference group that was H pylori positive was 58 and 59 years respectively. While there were 40% and 60% African Americans respectively in each group. Among patients with IDDD, H pylori was eradicated in 15 (out of 24) patients (60%) compared to 756 (out of 840) patients (90%) in the reference group (P<0.01). It was also observed that 80% of all H pylori positive IDDD patients were treated with antibiotics for periodontal disease.

Conclusion: Our study has identified patients with IDDD at high risk in failing treatment for eradicating H pylori infection. Antibiotic resistance and compliance as well as other factors such as re-infection because of the high prevalence of H pylori among these patients may be significant contributing factors. Alternative treatment regimens should be considered in this patient population along with routine confirmation of eradication in order to mitigate the adverse consequence of chronic H pylori infections.

CURRENT CATEGORY: B. Stomach
PRESENTATION TYPE: Poster Only
ACG Research Grant Support: No
Supported by Industry Grant: No
Commercial Products or Services: No
Initiated Research: Investigator
Financial Relationships: Not Applicable
FDA Approval: No
Designed Study: Investigator
Abstract Author: Investigator

AUTH DESIG: ACG Membership Status <font color="red">^</font>:^ Saqib Hassan : ACG Non-Member
Rehan Rais : ACG Non-Member
Asheesh Ray : ACG Non-Member
Tariq Hassan : ACG Member

AVERAGE SCORE: 5
REVIEWER FLAGS: (none)
REVIEWER RECOMMENDATION CODE DESCRIPTION: None

REVIEWER COMMENTS:
(no table selected)

TITLE: The High Incidence Of Treatment Failure In Eradicating Helicobacter Pylori Infection In Individuals With Intellectual Disabilities And Developmental Delay (IDDD) From A Long Term Care Facility.
(No Image Selected)
TITLE: Low Albumin level significantly increases the risk of venting Percutaneous Endoscopic Gastrostomy Complications.

PRESENTER: Ahmed Deabes

PRESENTER (INSTITUTION ONLY): Cleveland Clinic Foundation- Digestive Disease Institute- Center of Human Nutrition

PRESENTER (COUNTRY ONLY): United States

ABSTRACT BODY:

Purpose: Venting Percutaneous Endoscopic Gastrostomy (PEG) is a simple, technically feasible and safe procedure that helps alleviate obstructive symptoms in patients with gastrointestinal obstruction or pseudo-obstruction. The aim of this retrospective study was both to evaluate the safety of venting PEG for intestinal decompression in different patient groups and the major complication related to this procedure.

Methods: This study is a retrospective chart review. All patients with venting PEG tubes placed between January 2010 and September 2012 by the Gastroenterology service at Cleveland Clinic Foundation were reviewed. Data from the charts of patients who had PEG tubes inserted for decompression were extracted. We studied the patient’s demographics, type of complications, presence of diabetes, cardiovascular events, prior abdominal surgery, edema and the level of albumin. A total of 79 subjects were included in the study. Mean age was 57 ± 10 years and 52% were male. Forty-two percent of subjects had complications. The most common complication was tube dislodging (13.9%), followed by bleeding (11.4%), infection (10%) and other complications (6%).

Results: On univariable analysis, subjects with complications were found to be significantly more likely to have lower albumin, malignancies and recent infections. For every 1 unit increase in albumin level, the likelihood of having PEG complications decreased by 77% after adjusting for abdominal surgery and recent infections (p=0.002). Also, subjects with abdominal surgery had 3-fold higher odds of having complications (p=0.048). Subjects with recent infections also had 3-fold higher odds of having complications but this did not reach statistical significance (p=0.058).

Conclusion: Our study showed that complications with venting PEGs were more significant in patients with hypoalbuminemia, recent infection, and diabetes mellitus. These factors may affect postprocedural complications and long term outcomes in this patient population.

CURRENT CATEGORY: B. Stomach
PRESENTATION TYPE: Oral or Poster
ACG Research Grant Support: No
Supported by Industry Grant: No
Commercial Products or Services: No
Initiated Research: Investigator
Financial Relationships: No
FDA Approval: No
Designed Study: Investigator
Abstract Author: Investigator

AUTH DESIG: ACG Membership Status <font color="red">^</font>:<br>
Ahmed Deabes : ACG Member<br>Donald Kirby : ACG Member<br>

AVERAGE SCORE: 4.75
REVIEWER FLAGS: (none)
REVIEWER RECOMMENDATION CODE DESCRIPTION: None
REVIEWER COMMENTS:
TITLE: Low Albumin level significantly increases the risk of venting Percutaneous Endoscopic Gastrostomy Complications.

Image Caption: Albumin level and Venting PEGs complications
Title: Stimulation Parameters in Patients Treated with Gastric Electrical Stimulation for Severe Gastroparesis

Purpose: Gastric Electrical Stimulation (GES) is effective in improving nausea and vomiting in patients with gastroparesis (GP). With suboptimal clinical response, the custom has been to increase the energy delivered over time, by reprogramming the GES device.

Methods: We analyzed GES settings in 52 patients who underwent permanent GES implantation between March 2007 and March 2013. All patients had identical baseline GES energy settings: 5mA current, 330 µs pulse width, 14 Hz frequency, for 0.1 s on and 5.0 s off time. Patients were seen approximately every 3 months, symptoms were assessed by a modified Gastroparesis Cardinal Symptom Index (GCSI) score on a scale of 0-5 that inquired about nausea, vomiting, bloating, early satiety and post prandial fullness. Abdominal pain and epigastric burning were also assessed separately. For patients with suboptimal response, GES parameters were reprogrammed according to an established algorithm (N.Abidi et al. Neurogastroenterol 2006).

Results: There were a total of 52 patients, 32 with diabetic gastroparesis and 20 with non-diabetic causes (idiopathic 16, post-surgical 4); 11 men (21%) and 41 women (79%). GCSI scores decreased from a median of 2.75 at baseline to a median of 1.50 at 1 year (p=0.006) and a median of 1.67 (p=0.007) at 2 years after GES for all evaluable patients (27). Improvement was also seen in abdominal pain (p=0.01 and 0.01) and epigastric burning (p=0.03 and 0.02) at 1 and 2 years post GES therapy. 28 and 34 patients had their GES device reprogrammed at 1 and 2 years, respectively and GCSI scores were available for 20 patients before and after the reprogramming. At 1 year, there was no significant difference in GCSI scores between those who were reprogrammed compared to those who were not. However, there was a significant change in GCSI scores at 2 years in patients who had undergone reprogramming (median 3.83 to 1.50; p=0.006) versus those who had not (median 2.0 to 1.67; p=0.57).

Conclusion: The GCSI scores, abdominal pain and epigastric burning improved in all patients at 1 and 2 years after GES. Improvement was greatest in patients who had been reprogrammed, at two years. Our results support the reprogramming of GES device in patients who have suboptimal clinical responses to standard GES energy settings.
<table>
<thead>
<tr>
<th></th>
<th>Baseline*</th>
<th>1 year*</th>
<th>p-value at 1 year</th>
<th>2 years*</th>
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<tr>
<td><strong>Overall</strong></td>
<td>GCSI</td>
<td>2.75</td>
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<td>0.006</td>
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<td>Abdominal Pain</td>
<td>GCSI</td>
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<td>1.91</td>
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<td>NE</td>
<td>NE</td>
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*median scores
NE= Not Evaluable

**Title:** Stimulation Parameters in Patients Treated with Gastric Electrical Stimulation for Severe Gastroparesis

(No Image Selected)
Purpose: WMC (Smartpill®) is a cylindrical 2.8cm long and 11.7mm wide ingestible capsule used to evaluate regional, whole gut transit and motility. It is approved for evaluation of gastric emptying time in patients suspected with gastroparesis and colonic/whole gut transit in constipation or generalized dysmotility. Occasionally patients experience difficulty with swallowing WMC despite no esophageal obstruction. We report a novel approach of capsule placement in patients who experience difficulty with swallowing capsule.

Methods: Over 1 year, 3 patients requiring WMC test failed to swallow capsule despite multiple attempts > 1 hour period. All subjects came to motility lab after an overnight fast, swallowed a260 Kcal Smartbar and 100 ml water. All subjects had normal EGD previously excluding luminal obstruction. They either retained capsule in mouth or spit it back. For patient demographics see table. To facilitate placement, the WMC was grasped by Pillcam capsule placing device (Given). After applying oropharyngeal anesthesia with lidocaine, the device with capsule was advanced through the oropharynx into stomach. Under fluoroscopy we confirmed the location of the device tip in stomach. The capsule was released and the device was removed.

Results: All 3 subjects had a successful study. The results of WMC are shown in table. We combined oro-gastric placement with fluoroscopy to ensure that capsule is released in stomach and not in esophagus. 1 patient had prolonged retention of capsule for > 5 days and had a planned endoscopy 4 days later for evaluation of gastroparesis, and retained capsule was removed. All patients benefited from WMC study. No other adverse event was encountered (Table).

Conclusion: Peroral gastric placement of WMC using capsule placement device and fluoroscopy is feasible, and may serve as a useful method of delivering capsule into the stomach in patients encountering problems with ingestion of WMC. This method may allow performance of the transit/motility study and provide important pathophysiologic information in patients who encounter difficulty with swallowing capsule.
<table>
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<th>M/F</th>
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<tr>
<td>Pt 1</td>
<td>F</td>
<td>59</td>
<td>Abdominal pain, gas, constipation, difficulty in passing stool</td>
<td>Normal esophagus and stomach</td>
<td>1 hrs, 59 min (normal)</td>
<td>4 hrs, 48 min (normal)</td>
<td>88 hrs, 4 min (delayed)</td>
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<td>F</td>
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<td>&gt;72 hrs (delayed)</td>
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<td>Pt 3</td>
<td>F</td>
<td>74</td>
<td>Chronic nausea, reflux, bloating, dysphagia (solid/liquids)</td>
<td>Linear ulceration in esophagus, SmartPill and food in stomach</td>
<td>&gt;96 hrs (delayed) (retained in stomach)</td>
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**TITLE:** Peroral Gastric Placement of Wireless Motility Capsule (WMC, Smartpill®) Under Fluoroscopy: A Novel Method for Patients with Inability to Swallow
(No Image Selected)
Purpose: The aim of this study is to assess the development of gastric cancer precursors, including intestinal metaplasia (IM), despite the treatment for eradication of Helicobacter pylori, in order to determine the need for closer surveillance on this population.

Methods: Retrospective study of adult patients who had information on IM status and at least one H. pylori test (stool, biopsy, or CLO) found on EMR were included in this analysis. A composite H. pylori result was constructed using information from the 3 individual tests. Variables with significant IM association status in the bi-variable analysis were included in multivariable logistic regression analysis.

Results: 228 patients were included. The patients were analyzed in 2 groups (no IM vs. IM). No IM (198 patients): male 79(83, 16%), median age: 50, race: Hispanic 157(89,71%), African American 19(82,61%), White 4(66,67%), Asian 5(83,33%), Other 10(66,67%), smoking: 36(73,47%), PPI use: 136(83,44%), previous treatment for H.pylori: 85(85%), H. pylori in stool: 23(92%), H. pylori in biopsy: 45(84,91%), CLO test+: 45(90%), composite H. pylori: 82(87,23%). IM (30 patients): male 16(16,84%), median age: 61,5, race: Hispanic: 18(10,29%), African American: 4(17,39%), White: 2(33,33%), Asian: 1(16,67%) and Other: 5(33,33%), smoking: 13(26,53%), PPI use: 27(16,56%), previous treatment for H. pylori: 15(15%), H pylori in stool: 2(8%), H. pylori in biopsy: 8(15,09%), CLO test+: 5(10%), composite H. pylori: 12(12,77%). Age (p: 0,005), smoking (p: 0,02), PPI use (p:0,02) and race, other subgroup (p: 0,02) were statically significant. Multivariable analysis: age (OR: 1,05, 95%CI: 1,02), race other (OR: 4,36 and 95% CI: 1,34), smoking (OR: 3,42, 95%CI: 1,53) and PPI use (OR: 4,10 and 95% CI: 1,20).

Conclusion: Over three-quarters of the participants were Hispanic and age was significant with a higher incidence of intestinal metaplasia in older patients. History of smoking and previous use of proton pump inhibitors (PPI) were significant, however in contrast to existing knowledge, there was a higher incidence of intestinal metaplasia in subjects who had previous use of PPI. There was no statistical difference in the incidence of intestinal metaplasia between the groups that were positive on H. pylori. In view of lack of studies in the USA, this study will help further new guidelines for surveillance of patients with Intestinal Metaplasia despite the treatment for H. pylori, because as our study showed, does not protects against the development of Intestinal Metaplasia.
REVIEWER COMMENTS:
Ashwin Ananthakrishnan: [No Comments]
Henry Parkman: [No Comments]
Kia Saeian: [No Comments]
Sachin Wani: [No Comments]
(no table selected)

TITLE: Incidence of Gastric Intestinal Metaplasia in patients with negative Helicobacter pylori
(No Image Selected)
Purpose: H. Pylori infection and NSAIDS have long been implicated in the etiology of peptic ulcer disease. Previous studies have found a higher risk of bleeding and ulcer recurrence in the non H pylori and non NSAID population. In this study we attempted to study the outcomes of bleeding from the four most common subgroups of peptic ulcer disease.

Methods: Patients diagnosed with peptic ulcer disease and gastrointestinal bleeding were included in the study. Patients were grouped based on NSAID use and H pylori infection into four subgroups. H Pylori negative and NSAID negative (group 1), H Pylori negative NSAID positive (group 2), H Pylori positive NSAID negative (group 3) and H. Pylori positive and NSAID positive (group 4). Outcome data including incidence of re-bleeding, transfusion requirements, need for repeat endoscopy and length of stay were analyzed.

Results: 249 subjects were enrolled in the study. 51% were male and 49% were female. 83 subjects were excluded due to sepsis, coagulopathy, prior gastric surgery or lack of histopathology. 63% of the 166 subjects who met inclusion criteria were in group 1, 12% were in group 2, 23% were in group 3 and 2% were in group 4. In group 1, 49% required blood transfusion compared to 55%, 55.3%, and 100% of patients requiring transfusions in groups 2, 3 and 4 respectively (p=.29). Average length of stay was 10.1 days for group 1, 7.8 for group 2, 8.9 for group 3 and 12.6 days for group 4 (p=.67). Repeat endoscopy rates (p=.42) and hemoglobin on admission (p=.69) did not vary significantly between the four groups.

Conclusion: Outcome analysis of the four subgroups of PUD that we studied did not show significant differences in transfusion requirement, incidence of rebleeding, need for repeat endoscopy and length of hospital stay. There was a higher trend in group 4 subjects (H Pylori and NSAID positive) towards higher transfusion requirements and longer lengths of stay but the small number in this group negated any valid conclusions.
TITLE: Outcome analysis of gastrointestinal bleeding for four common subgroups of peptic ulcer disease. A retrospective study.

(No Image Selected)
Purpose: Gastric adenocarcinoma (GAC) is a leading cause of cancer death in the US. In 2010, the age-adjusted incidence rate was 7.5 per 100,000 men and women per year. We sought to determine how the racial/ethnic and socioeconomic (SES) characteristics affect the mortality from GAC as well as the likelihood that a veteran may receive an upper gastrointestinal endoscopy (EGD) prior to the diagnosis of GAC.

Methods: Chart review was done for patients diagnosed with GAC between 2000 and 2012 at our institute. Information about demographics, past medical history, lifestyle, prior endoscopy, stage of tumor at diagnosis, mortality after diagnosis and SES quintiles (using 2011 census block groups based on method described by Yost et. al) were obtained. Analysis was performed using SAS 9.1.

Results: We found 83 veterans with diagnosis of GAC (mean age 67.3 years, all males, 29 smokers). Sixteen patients (19.8%) were obese (BMI≥30), 59% (n=49) had GERD, and 57.8% (n=48) had previous history of gastritis. Seventy patients died and 2 were lost to follow up.

Twenty (24.10%) patients were non-Hispanic blacks (NHB), 56 (67.47%) were non-hispanic whites (NHW), and 7 (8.43%) were other race and ethnicity including Hispanics. Fifteen (18.07%) patients could be classified as of low SES, 52 (62.65%) as of middle SES, and 16 (19.28%) as of high SES group.

Among NHB, 10 (50%) had stage IV cancer, 5 (25%) had stage III cancer, 4 (20%) had stage II cancer, and 1 (5%) had stage I cancer. Among NHW, 15 (26.79%) had stage IV cancer, 23 (41.07%) had stage III cancer, 7 (12.50%) had stage II cancer, and 11 (19.64%) had stage I cancer. NHB were 6.32 times more likely to be diagnosed with stage IV cancer (p=0.0977). Eighteen (90%) NHB while 46 (82.14%) NHW died from GAC. NHB had a non-significant 1.96 times higher likelihood of death (95% CI 0.40-9.81) when compared to NHW. Mean survival for NHB was 477 days versus 589 days for NHW (p=0.3170). While 47% NHW were more likely to get 2 or more EGDs prior to the diagnosis of GAC, 21% of NHB underwent a prior EGD (p=0.0731).

While 87% of patients in low SES were like to be diagnosed with advanced stage cancers (stage III and IV), only 47% patients in high SES were diagnosed with late stage gastric adenocarcinoma (p=0.2264). Patient in low SES were 1.33 times more likely to die compared to patients in high SES group (OR=1.33, 95% CI 0.244, 7.28). Eighty percent patients in low SES died while only 25% patients in high SES died (p=0.2670).

Conclusion: Both low SES and NHB race are risk factors for higher stage at diagnosis and higher mortality from gastric adenocarcinoma. Additionally, NHB and low SES are also associated with EGD intervention disparities. Further multi-center prospective studies are needed.
Jaime Lopez: ACG Non-Member
Nishant Puri: ACG Member
Christian Jackson: ACG Member

**AVERAGE SCORE:** 4.5

**REVIEWER FLAGS:** Kia Saeian - Newsworthy?: 1

**REVIEWER RECOMMENDATION CODE DESCRIPTION:** None

**REVIEWER COMMENTS:**
Ashwin Ananthakrishnan: [No Comments]
Henry Parkman: [No Comments]
Kia Saeian: [No Comments]
Sachin Wani: [No Comments]
(no table selected)

**TITLE:** The Effect of Socioeconomic, Racial Disparities and a Prior EGD on outcomes of Gastric Adenocarcinoma in a Veteran Population: A ten year single center VA experience

(No Image Selected)
TITLE: Is increased upper gastrointestinal uptake found incidentally on (18) FDG PET/CT of any clinical significance?

PRESENTER: Vipin Mittal
PRESENTER (INSTITUTION ONLY): Dept of Internal Medicine, St Joseph's Regional Medical Center
PRESENTER (COUNTRY ONLY): United States

ABSTRACT BODY:

**Purpose:** (18) Fluorodeoxyglucose (FDG)-positron emission tomography (PET)/computed tomography (CT) is a widely used imaging modality for tumor staging, monitoring of treatment response and recurrence. A number of studies have correlated the abnormal colonic uptake of (18)FDG with significant colonoscopic findings but it is unknown if the same holds true for increased upper gastrointestinal uptake (IUGU) and esophagogastroduodenoscopy (EGD) findings. The aim of our retrospective study was to evaluate such a correlation.

**Methods:** A retrospective review of 1372 new patients who had PET/CT scans between January 2010 and May 2013 was performed. Those with known gastric or esophageal malignancies were removed from the study (n = 278). Of the remaining 1094 subjects, PET/CT scans were evaluated for focal uptakes in the stomach and/or esophagus. The latter were then correlated with EGD findings.

**Results:** Of the 1094 subjects, 107 patients (9.8%) were found to have IUGU. There were 56 females and 51 males with a mean age of 62 years. Only 21 (19.6%) were followed with an EGD. 4 patients (19%) were found to have normal findings and the remaining 17 (81%) were found to have the following: non-specific inflammation (gastritis, esophagitis) in 70.6%, gastric polyps in 17.6%, inflammation at gastrostomy tube site in 17.6%, hiatal hernia in 11.7% and esophageal candidiasis in 5.9%. Only two patients had Helicobacter pylori infection. No patient was found to have ulcer disease or a malignancy.

**Conclusion:** (18) FDG is a marker of glycolysis and the focal activity can be due to a number of benign causes, such as inflammation or infection. The major limitation of the study is that only those patients who underwent EGD at our medical center could be included. Nevertheless, it was reassuring to find that none of the studied patients had an upper gastrointestinal malignancy.

CURRENT CATEGORY: B. Stomach
PRESENTATION TYPE: Poster Only

ACG Research Grant Support: No
Supported by Industry Grant: No
Commercial Products or Services: No
Initiated Research: Investigator
Financial Relationships: Not Applicable
FDA Approval: No
Designed Study: Investigator

AUTH DESIG: ACG Membership Status <font color="red">*</font>:
Vipin Mittal : ACG Member
Arya Karki : ACG Member
Walid Baddoura : ACG Non-Member

AVERAGE SCORE: 4.5
REVIEWER FLAGS: (none)
REVIEWER RECOMMENDATION CODE DESCRIPTION: None

REVIEWER COMMENTS:
(no table selected)

TITLE: Is increased upper gastrointestinal uptake found incidentally on (18) FDG PET/CT of any clinical significance?

(No Image Selected)
ABSTRACT BODY:

Purpose: The actual distribution of Helicobacter pylori (H. pylori) in Asian developing countries is controversial and its association with gastric cancer has not been established. Our aim was to determine the prevalence of H. pylori, correlate with related diseases and study gastric cancer incidence along with its potential association with H. pylori in Nepal.

Methods: Among 3057 patients referred for endoscopy, 2820 eligible patients underwent upper gastrointestinal endoscopy and H. pylori was determined by histopathology and Rapid Urease test.

Results: Among 2820 eligible subjects, the prevalence of H. pylori was 29.4% in overall distribution, 41.1% in gastritis and or duodenitis, 69.5% in gastric ulcer, 84.7% in duodenal ulcer, 20.8% in gastric polyp and 11.5% in gastric cancer. The age-standardized (world) incidence rate of gastric cancer in Nepal was 3.3 per 100,000 during the year 2010-2013. The H. pylori infection was significantly associated with gastritis and or duodenitis \[P<0.001; \text{Odds Ratio (OR)} \quad 1.53, \quad 95\% \text{ Confidence Interval (CI) 1.47-1.59}\], gastric ulcer \(P<0.001; \text{OR} \quad 18.62, \quad 95\% \text{ CI 12.40-27.81}\), duodenal ulcer \(P<0.001; \text{OR} \quad 48.89, \quad 95\% \text{ CI 25.23-94.75}\), gastric polyp \(P=0.001; \text{OR} \quad 7.66, \quad 95\% \text{ CI 3.18-18.44}\) and gastric cancer \(P=0.005; \text{OR} \quad 3.78, \quad 95\% \text{ CI 1.82-7.86}\).

Conclusion: Our study showed that the prevalence of H. pylori was significantly high in the patients with gastritis and or duodenitis, and peptic ulcer. The H. pylori infection was also significantly associated with gastric polyp and gastric carcinoma in Nepal. Further study is needed to establish the causal relation of H. pylori with gastric polyp and gastric carcinoma in Nepal.
Do African American women have an increased risk of stomach malignancy? Retrospective analysis at a Southern Regional Health Center.

Moheb Boktor

Louisiana State University Health Sciences Center in Shreveport, LA

United States

Purpose: Background. It has been suggested that male gender represents a significant risk factor for development of stomach cancer in the United States. Also, it has been reported that African Americans develop stomach cancer at twice the rate of Caucasians. To determine if there was a geographic or socio-economic influence on the development of gastric cancer, we studied the patient base at LSU Health - Shreveport, a Southern regional medical center serving a predominantly indigent patient population with an equal representation of black and white patients.

Methods: We performed a retrospective analysis of gastric cancer (using CPT code 151.9 from 2005 to 2011 at LSU Health, a public health institution.

Results: Interestingly we found that white men and women developed approximately equal rates of stomach cancer. (WM= 7.7+/- 1.36;WF= 7.14 +/- 1.1) compared with AA (BM=12.7 +/- 1.2;BF = 13.1 +/- 1, Average +/- standard error of mean.) Surprisingly, BF showed the highest patient numbers among the four groups and was not significantly different from BM. We also considered clinic visits as a ‘surrogate marker’ of disease activity in these different populations. Among patients presenting with a diagnosis of gastric cancer, the number of clinic visits was highest among BM. Black males had significantly more clinic visits than black females (**p<0.01) and were also more numerous than clinic visits for white females or black females (**-both p<0.001.). Similar trends were found for inpatient visits for patients with this diagnosis.

Conclusion: The incidence of gastric cancer in BF was higher than the numbers anticipated from historically reported national averages. BM appeared also to require more clinic visits compared to other groups. In our population, socio-economic and geographical condition may lead to higher than average rates of gastric cancer in black women (compared with national trends.) Larger studies should be performed to determine the risk factors contributing to these findings. These findings also suggest that greater surveillance in this group may be warranted particularly when low socioeconomic status or regional geographic influences may exist.

CURRENT CATEGORY: B. Stomach

PRESENTATION TYPE: Poster Only

ACG Research Grant Support: No
Supported by Industry Grant: No
Commercial Products or Services: No
Initiated Research: Investigator
Financial Relationships: No
FDA Approval: No
Designed Study: Investigator
Abstract Author: Investigator

AUTH DESIG: ACG Membership Status: Kunal Suryawala : ACG Non-Member
Moheb Boktor : ACG Member
Abhishek Seth : ACG Non-Member
Avinash Aravantagi : ACG Member
Ankur Sheth : ACG Member
James Morris : ACG Member
Paul Jordan : ACG Member
Jonathan Alexander : ACG Non-Member

AVERAGE SCORE: 5.75

REVIEWER FLAGS: (none)

REVIEWER RECOMMENDATION CODE DESCRIPTION: None
TITLE: Do African American women have an increased risk of stomach malignancy? Retrospective analysis at a Southern Regional Health Center.
(No Image Selected)
Purpose: the aim of this study is to conduct a cohort study to determine whether Mexican population overuse of inhibitors of proton pump and determine the use without indication and also to identify alarm symptoms prior treatment.

Methods: We collected 3 age groups; male and female gender, Schooling; Medication; who gave them the indication to use it;consumption habit; total consumption time; Reason: dyspepsia, heartburn or regurgitation, indigestion or only for medical reasons, if present at least one alarm symptom prior to initiation of therapy.

Results: A total of 136 random people were interviewed which 94 69% consumed PBI or ranitidine, the age group with the highest consumption was the 25 to 55 years in 75%, followed by 15% in those aged 55 years and finally under 25,10%. Women had more consumption by 62%. According to their schooling predominated by 49% degree, 16% graduate, 12% primary school, 10% high school, none 10%, 3% and technical. The most commonly used medication was omeprazole by 68% followed by 12% pantoprazole, esomeprazole and lansoprazole also by 5% and 3% respectively; ranitidine by 12%. 40% of these were patent, 39% generic, 11% institutional and 10% similar. Habit consumption, 78% corresponded to once daily, 19% 2 times a day and 3% more than 2 times a day. Time consumption 41% more than 1 year, 21% 6 months to 1 year, 21% one month, 16% for a week, and 1% 3 months. The most frequent symptom was dyspepsia by 68%, followed by heartburn and or regurgitation 14%, 14%, had more than 2 symptoms 2% indigestion and 2% by medical indication. 17% had at least one alarm symptom prior treatment, of which 13% were dysphagia, 2% weight loss, 1% chest pain and 1% hematemesis. The prescription was made by general practitioner in 37%, followed by gastroenterologist in18%, 12% other specialist, 27% by friend, family member or self-medication and 6% by media.

Conclusion: In the Mexican population there overuse of proton pump inhibitors and ranitidine is of 70%, being used mostly by young patients under 55 years in witch an average consumption is greater than 1 year; omeprazole was the most used, frequency of self-medication was 33%, corresponding to a third of the cases, 17% of people presented alarm symptoms prior treatment

The use of these medications should be better regulated, so as to have more precise indications because many patients may have alarm symptoms and not be captured by health personnel indicated for monitoring and so avoid long-term complications.
TITLE: indiscriminate use of inhibitors of the proton pump in the mexican population.
(No Image Selected)
ABSTRACT BODY:

Purpose: The significance of Helicobacter pylori (H. pylori) remains an area of great debate. Some regard H. pylori as a lethal pathogen that causes gastritis, ulcers and cancer. Others state that it is an important member of the microbiome, and eradication in people without disease will have harmful ramifications for both the individual and society. Vertical Sleeve Gastrectomy (VSG) is the fastest growing bariatric procedure. As the majority of the stomach is resected, tissue colonized with H. pylori and the bulk of acid producing cells are removed. As a result, the need for detection and treatment of H. pylori in patients undergoing VSG is unknown.

Methods: Four hundred and eighty patients undergoing VSG between January 2011 and April 2013 are the subject of this report. All underwent upper gastrointestinal swallow study (UGIS) without other screening modality to detect H. pylori. Three surgeons at a single institution performed the procedures. The remnant stomach was sent to Pathology and tested for presence of H. pylori using immunohistochemistry. All patients were discharged on proton pump inhibitors and followed in a bariatric center. If H. pylori was detected, antibiotic treatment was not initiated.

Results: Of the 480 patients who underwent VSG, 52 were found to be H. pylori positive based on examination of the pathological specimen. There was no statistically significant difference in age (p=0.77) sex (p=0.48) or preoperative BMI (p=0.39) between the two groups. There were a total of 17 readmissions post-op. Five of these were in the H. pylori positive cohort with the remainder in the H. pylori negative cohort. The reasons for admission are shown in Table 1. Six of these complications were classified as severe (anastomotic leak, intra-abdominal fluid collection or abscess), with 2 in the H. pylori positive cohort and 4 in the H. pylori negative cohort. There was no statistically significant difference in the severe complication rates between the 2 groups (p=0.67). There were no readmissions for gastric or duodenal ulceration or perforation.

Conclusion: Our data suggests that there is no increase in early complications, perforations and symptomatic ulcers in patients with H. pylori undergoing VSG who do not get eradication therapy. Whether there are long term ramifications is yet to be determined. If this is confirmed in long term follow up it would mean that pre-operative efforts to detect H. pylori in patients scheduled for VSG is not necessary or cost effective. Furthermore, if detected peri-operatively, the immediate administration of multi-drug therapy, which can be difficult to tolerate in patients post-VSG, is not mandatory.

CURRENT CATEGORY: B. Stomach
PRESENTATION TYPE: Oral or Poster
ACG Research Grant Support: No
Supported by Industry Grant: No
Commercial Products or Services: No
Initiated Research: Investigator
Financial Relationships: No
FDA Approval: No
Designed Study: Investigator
Abstract Author: Investigator

AUTH DESIG: ACG Membership Status <font color="red">*</font>
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Andrew Brownlee : ACG Non-Member
Joanne Weiskopf : ACG Non-Member
Kinneri Kothari : ACG Non-Member
Patricia Campbell : ACG Non-Member
Erica Bromberg : ACG Non-Member

AVERAGE SCORE: 4.75
REVIEWER FLAGS: (none)
REVIEWER RECOMMENDATION CODE DESCRIPTION: None

REVIEWER COMMENTS:

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* Patient admitted for hemorrhoidal bleeding **Patient admitted for Portal vein thrombosis

**TITLE:** The effect of Helicobacter pylori on outcomes in patients undergoing vertical sleeve gastrectomy
(No Image Selected)
Purpose: Relations of delayed gastric emptying scintigraphy to food retention on EGD are poorly understood. We previously accessed an endoscopy database to report associations of retained food with obstructive and non-obstructive disorders, opiate use, and uncontrolled diabetes (Gastroenterology 2013; 144: Mo2082). In this complementary study, we accessed a nuclear medicine database to characterize (i) prevalences of food retention on EGD in patients with scintigraphy-defined gastroparesis of different etiologies, (ii) associations of scintigraphy delays with magnitudes of retained food, and (iii) relations of degrees of food retention to symptoms and medication use.

Methods: The Nuclear Medicine database identified 631 patients with delayed gastric emptying scintigraphy (>10% 4 hr and/or >60% 2 hr retention) from 1/2008-9/2012. Provation, CareWeb, and MiChart databases were accessed to define degrees of food retention, emptying delay etiologies, symptoms, and medication use.

Results: Food retention was noted on EGD in 167/631 patients with delayed emptying (26%). Small, medium, and large amounts were retained in 6%, 11%, and 9%, respectively. 4 hr scintigraphic retention was higher with retained food on EGD (42±25% vs. 33±22%)(P<0.001), especially with large amounts (46±26%)(P<0.001). Severe emptying delays (>35% 4 hr retention) were more prevalent with food retention (50% vs. 34%)(P<0.001). Postsurgical etiologies (fundoplication, bariatric surgery, gastric/esophageal resection) were more prevalent with food retention (17% vs. 9%)(P=0.03), especially large amounts (20%)(P=0.008). Idiopathic gastroparesis associated with retained food less often (39% vs. 49%)(P=0.02). Diabetes and other etiologies did not relate to food retention. Vomiting (49% vs. 42%)(P=0.09) and bloating (13% vs. 8%)(P=0.08) prevalences trended higher with food retention, while nausea, pain, fullness, and GERD did not. Opiate use trended higher with food retention (39% vs. 31%)(P=0.06) and was highly prevalent with large amounts of retained food (50%)(P=0.004). Use of insulin, other drugs that delay emptying or cause nausea and vomiting did not relate to food retention.

Conclusion: Gastric food retention is found on endoscopy in one quarter of patients with scintigraphy-defined gastroparesis. Emptying delay severity correlates with amounts of retained food. Postsurgical gastroparesis shows a predilection for food retention, while idiopathic disease does not. Gastroparetics with food retention show trends to greater vomiting and bloating prevalence and are more often prescribed opiates. This analysis delineates factors promoting retention of indigestible residue in gastroparesis defined by delayed emptying of digestible solids.
TITLE: Relation of Scintigraphic Gastric Emptying Delays to Degrees of Gastric Food Retention on Endoscopy in Gastroparesis: Importance of Etiologies, Symptoms, and Medication Use

(No Image Selected)
Synchronized Transcutaneous Electroacupuncture Improves High-Fat Meal Induced Impairment of Gastric Slow Waves and Autonomic Function in Healthy Subjects

Gengqing Song

Texas Tech University Health Sciences Center, Paul L. Foster School of Medicine

United States

Purpose: Impairment of gastric slow waves and autonomic function are highly prevalent in functional gastrointestinal disorders (FGIDs). Transcutaneous electroacupuncture (TEA) is a needleless method of electroacupuncture and has been reported to improve gut symptoms, motility and myoelectrical activity. Synchronized TEA (STEA), a novel method that synchronizes the electrical stimulation with inspiration, has been shown to be more potent than TEA in enhancing vagal activity. The aim of this study was to investigate the effects of STEA at acupoint ST36 on gastric slow waves and autonomic function in healthy subjects with high-fat meal.

Methods: Eight healthy subjects (5M, 3F, ages 23-46, mean age 30, BMI 22.4±0.6) were recruited. Each subject came to the lab for five sessions: standard meal control, high-fat meal control, sham stimulation, TEA and STEA. High fat meal (fat contributed to 62% of total calories) was served in sham, TEA and STEA sessions. Each session consisted of a 30 min baseline, standard or high-fat meal consumption, a 30 min post-meal period with or without electrical stimulation. Electrogastrogram (EGG) and electrocardiogram (ECG) were recorded during each session. The stimulation parameters are: 2s-on, 3s-off, 0.6ms, 40Hz, 2-10mA.

Results: Results: 1) Compared with the standard meal, the high-fat meal reduced normal percentages of gastric slow waves (75.1±10.3% vs. 95.1±8.3%, P<0.05), suppressed dominant power of the slow waves (40.1±4.7 vs. 46.8±5.1, P<0.05), and impaired vagal activity (0.45±0.05 vs. 0.58±0.03, P<0.05). 2) In comparison of sham stimulation, both STEA and TEA enhanced postprandial normal percentages of gastric slow waves (90.1±6.5% and 85.6±7.1% vs. 78.2±9.5%, P<0.05), dominant power (46.1±5.3 and 44.3±5.8 vs. 40.5±4.6, P<0.05) and vagal activity (0.57±0.04 and 0.51±0.05 vs. 0.45±0.07, P<0.05). 3) STEA was more potent than TEA in increasing vagal activity (P<0.05). Although STEA had a tendency to generate better effects than TEA in promoting normal gastric slow waves and dominant power, it did not achieve statistical significance (P>0.05).

Conclusion: Both STEA and TEA improves gastric dysrhythmias and autonomic function impairment induced by high fat meal in healthy subjects. STEA seems to be more potent than TEA in enhancing vagal activity and might be a good therapeutic option for treating FGIDs.
TITLE: Synchronized Transcutaneous Electroacupuncture Improves High-Fat Meal Induced Impairment of Gastric Slow Waves and Autonomic Function in Healthy Subjects
**Purpose:** We assessed the long term clinical outcomes of gastric electrical stimulation (GES) therapy in patients with severe gastroparesis.

**Methods:** Gastroparesis patients (n= 50, diabetic =31, non-diabetic =19) treated with gastric electrical stimulation (GES) therapy were retrospectively evaluated. Clinical improvement was assessed by a modified Gastroparesis Cardinal Symptom Index (GCSI) score that inquired about nausea, vomiting, bloating, early satiety and post prandial fullness. Abdominal pain, hospitalization and need for enteral nutrition were also evaluated at the beginning of the study (baseline) and at one and two year intervals.

**Results:** GCSI scores, abdominal pain, number of hospitalizations, and use of tube feeds decreased in all patients at 1 and 2 years after GES therapy (Table 1 and Table 2). Among diabetic patients the decrease in GCSI scores and abdominal pain was statistically significant at both one and two years after GES. Among non diabetics GCSI was not significantly reduced from baseline at one or two years. In both diabetics and non-diabetics the need for hospitalization and enteral nutrition decreased at one year and two years from baseline. Four patients had their devices removed because of infection.

**Conclusion:** GES therapy significantly improved GCSI scores, abdominal pain, hospitalization requirement and need for enteral nutrition in patients with severe gastroparesis at one and two year intervals from baseline. This efficacy was accompanied by a good safety profile.

**ABSTRACT BODY:**

**Control ID:** 1747325  
**Title:** Gastric Electrical Stimulation Improves Long Term Outcomes of Patients with Gastroparesis  
**Presenter:** Mehnaz Shafi

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**Abstract Author:** Investigator  

**Table 1**

<table>
<thead>
<tr>
<th></th>
<th>Baseline*</th>
<th>1 year*</th>
<th>p-value at 1 year</th>
<th>2 years*</th>
<th>p-value at 2 years</th>
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<tbody>
<tr>
<td>Overall GCSI</td>
<td>2.75</td>
<td>1.50</td>
<td>0.004</td>
<td>1.67</td>
<td>0.002</td>
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</table>

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**AUTH DESIG:** ACG Membership Status: Mehnaz Shafi : ACG Member  
Anam Hameed : ACG Non-Member  
Waqar Qureshi : ACG Member  

**AVERAGE SCORE:** 2.25  
**REVIEWER FLAGS:** (none)  
**REVIEWER RECOMMENDATION CODE DESCRIPTION:** None  
**REVIEWER COMMENTS:**  
Ashwin Ananthakrishnan: [No Comments]  
Henry Parkman: [No Comments]  
Kia Saeian: [No Comments]  
Sachin Wani: [No Comments]
### Table 2

<table>
<thead>
<tr>
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<th>Baseline N(%)</th>
<th>1 year N(%)</th>
<th>2 years N(%)</th>
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<tbody>
<tr>
<td><strong>Overall</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>50 (100)</td>
<td>30 (100)</td>
<td>29 (100)</td>
</tr>
<tr>
<td>Hospitalization</td>
<td>36 (72)</td>
<td>15 (50)</td>
<td>14 (48)</td>
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<tr>
<td>Feeding tube</td>
<td>31 (62)</td>
<td>10 (33)</td>
<td>11 (38)</td>
</tr>
<tr>
<td><strong>DM</strong></td>
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</tr>
<tr>
<td>Total</td>
<td>31 (100)</td>
<td>18 (100)</td>
<td>17 (100)</td>
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<tr>
<td>Hospitalization</td>
<td>25 (81)</td>
<td>9 (50)</td>
<td>9 (53)</td>
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<td>Feeding tube</td>
<td>19 (61)</td>
<td>8 (44)</td>
<td>7 (41)</td>
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<tr>
<td><strong>Non-DM</strong></td>
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<tr>
<td>Total</td>
<td>19 (100)</td>
<td>11 (100)</td>
<td>10 (100)</td>
</tr>
<tr>
<td>Hospitalization</td>
<td>11 (58)</td>
<td>5 (45)</td>
<td>4 (40)</td>
</tr>
<tr>
<td>Feeding tube</td>
<td>12 (63)</td>
<td>2 (18)</td>
<td>4 (40)</td>
</tr>
</tbody>
</table>

*median scores

**TITLE:** Gastric Electrical Stimulation Improves Long Term Outcomes of Patients with Gastroparesis
(No Image Selected)
Purpose: Gastric ulcers (GUs) carry a risk of malignancy, therefore, endoscopists are challenged with the question of how to rule out malignancy. Routine endoscopic surveillance is not advised, however, is still overused with a national average of 25% in the outpatient setting.

Methods: We reviewed the EGDs of 165 different patients with GUs between November 2009 and November 2012. We excluded 52 cases with GU that normally would not be biopsied, such as patients who presented with bleeding or ulcers that had stigmata of high risk bleeding (active bleeding, visible vessel or adherent clot).

Results: Repeat EGD in 8-12 weeks was recommended for 96 (85%) patients. Of those 96 patients, 72 (64%) underwent their repeat EGD, while 24 (21%) either lost follow up or had repeat EGD at a different facility. Of the 72 patients who underwent repeat EGD, the GU was still present in 9 patients and was completely healed or was healing in 63 patients. Twenty-five (22%) GUs were biopsied at initial EGD. Of the 25 biopsied GU at initial EGD, 23 were benign and 2 were adenocarcinomas. Four (3.5%) GU appeared endoscopically suspicious for malignancy. These suspicious looking GUs were biopsied at index EGD: 2 were adenocarcinomas, 1 was fungal infection and 1 was benign.

Conclusion: Despite the presence of guidelines that discourage routine EGD surveillance for all patients with EGD it is still a very common practice. Our rate of endoscopic surveillance was significantly higher than the national rate (64% vs 25%). Such a high rate of surveillance did not reveal any additional gastric cancers which adds more evidence to the low yield of routine surveillance. On the other hand, the rate of GU biopsy of GU at initial EGD is low 22%, which reflects that endoscopists mostly recommend surveillance over performing biopsies at initial EGD.