1. SUCCESSFUL ENDOSCOPIC REMOVAL OF LARGE SOLITARY TYPE III GASTRIC CARCINOID
Mohamed Abdelhafez, Mayada Elnegouly, Ali El Hindawy
Gastrointestinal Endoscopy Unit, Cairo University, Cairo, Egypt

Objective of the study: To evaluate the endoscopic management of large solitary type III gastric carcinoid tumor by using loop and let go technique.

Methods: A 32 year old female patient presented with continuous abdominal pain for the past 6 months, with a single attack of melena. Abdominal ultrasound revealed a gastric polypoidal mass at the site of the greater curvature. Upper endoscopy showed a large polyp (about 4 X 5 cm), with a small central ulcer. Biopsies revealed chronic gastritis. EUS showed a hypoechoic lesion with smooth margins arising from the submucosal layer with no infiltration of deeper layers or regional lymph nodes. EUS FNA was not available. Abdominal CT showed no evidence of lymphadenopathy or other organs metastasis.

The endoscopy, ultrasound, and EUS were highly suggestive of GIST tumor of the stomach, in spite of absence of histopathology. The decision was taken for endoscopic removal. The endoloop was applied and tightened around the base of the lesion, and unroofing was done by resecting the upper half of the lesion. The cut section of the specimen showed brownish yellow hard tissue. Histopathology surprisingly showed well differentiated neuroendocrine tumor. With the absence of atrophic gastritis, carcinoid syndrome, and with normal fasting gastrin level, a diagnosis of type III gastric carcinoid was made.

Results: Upper endoscopy and EUS were done after 1 week to assure complete removal of the tumor. The patient was then subjected to vigilant follow up in the form of upper endoscopy, EUS, and abdominal CT every 3 months for the first year with no recurrence of the tumor. Follow up every 3 months for another year, then every 6 months is now planned.

Conclusions: There have been case reports of endoscopic removal of type I and II gastric carcinoid. Gastrorectomy is the therapy of choice for type III. Although there are no evidence in the literature about endoscopic removal of type III, it could be a successful approach under specific criteria.

2. HEMODYNAMIC ALTERATION AND COMPLICATION RATE AFTER UNSEDATED ESOPHAGOGASTRODUODENOSCOPY PROCEDURES IN GERIATRIC PATIENTS
Somchai Amornyonit, Siriporn Kongphlay
Department of Anesthesiology and Siriraj GI Endoscopy Center, Faculty of Medicine Siriraj Hospital, Mahidol University, Bangkok 10700, Thailand

Objective of the study: Unsedated esophagogastroduodenoscopy (UEGD) is safely performed in elderly patients. However, it can induce hemodynamic alterations and complications. The aim of this study was to compare and evaluate the complication rate and alteration of blood pressure and heart rate after UEGD procedure between geriatric patients and younger patients.

Methods: 922 patients underwent UEGD procedures in one year. All patients who had ASA physical status ≥ II and no history of hypertension, diabetes and cardiovascular diseases were categorized into the two groups. Patients aged < 65 years were in group A, and patients aged ≥ 65 years were in group B. The primary outcome variable was the complication rate after the procedure. The secondary outcome variables were the alteration of blood pressure and heart rate.

Results: After matching gender, weight, ASA physical status and indications of procedure, there were 342 patients in group A and B. All endoscopies were completely successfully. There were no significant differences in gender, weight, ASA physical status, indication of procedure, hemodynamic parameters, and complications between the two groups. All complications were mild degree, transient and did not require medications.

Conclusions: UEGD for geriatric patients was safe and effective. Complication rate and alteration of blood pressure and heart rate after UEGD in geriatric patients did not higher than in younger patients.

3. PROPOFOL-BASED DEEP SEDATION FOR ENDOSCOPIC ULTRASONOGRAPHY PROCEDURE IN DIABETIC PATIENTS IN A DEVELOPING COUNTRY
Somchai Amornyonit, Siriporn Kongphlay
Department of Anesthesiology and Siriraj GI Endoscopy Center, Faculty of Medicine Siriraj Hospital, Mahidol University, Bangkok, Thailand

Objective of the study: Endoscopic ultrasonography (EUS) is an invasive procedure for diagnosis and treatment of gastrointestinal tract abnormalities. There is no recent information on deep sedation of this procedure in diabetic patients. The aim of this study was to evaluate the clinical efficacy of propofol-based deep sedation (PBDS), and to compare between diabetic and non-diabetic patients for EUS procedure in a teaching hospital in Thailand.

Methods: We undertook a retrospective review of the sedation service records of patients who underwent EUS procedures from December 2006 and March 2010. All patients were classified into two groups. Group C was diabetic patients and group D was non-diabetic patients. The primary outcome variable of the study was the successful completion of the procedure. The secondary outcome variables were sedation related complications during and immediately after the procedure.

Results: After matching age, gender, indications of procedure and type of interventions, there were 84 patients in group C, and 44 patients in group D. There were no significant differences in gender, weight, procedure time and indication of endoscopy between the two groups. ASA physical status and weight in group C was significantly higher than in group D. All patients in both groups were concluded with the successful completion of the procedure. The combination of fentanyl, propofol and midazolam was used in both groups. The mean dose of propofol, fentanyl and midazolam in both groups was not significantly different. Sedation-related adverse events were not statistically significantly different in both groups. All adverse events were easily treated, with no adverse sequelae.
Conclusions

PBDS for EUS procedure in diabetic patients by trained anesthetic personnel with appropriate monitoring was safe and effective. The complication rate of this technique in diabetic patients was not different or worse than in non-diabetic patients. Serious adverse events were rare in our population.

4. CAN WE RESECT EGC WITH SIGNET RING CELLS IN EUROPE?

Fabrice Caillot, Endoscopy unit, Erwan Bories, Endoscopy unit, Jérôme Guiramand, Surgery unit, Christian Pesenti, Endoscopy unit, Florat Poizat, Pathology unit, Geneviève Monges, Pathology unit, Marc Giovannini, Endoscopy unit, Paoli Calmette Institute, Marseille, France

Objective of the study: Early gastric carcinoma is defined as any invasive adenocarcinoma confined to mucosa or submucosa. In Paris classification it is proposed as a guideline to perform endoscopic resection for well-differentiated carcinoma with maximum involvement Sm1. Undifferentiated and signet ring cell carcinoma are excluded of this recommandation. Large japonese series have already concluded an extension to these criteria to EGC with signet ring cells. Through a serial cases of signet ring carcinoma we will discuss the possibility to resect in Europe EGC with signet ring cells. Methods: We included retrospectively patients with histological classification T1 of gastric cancer and with histology presence of signet ring cells. Data were extracted from hospital gastrectomy register from 2000 to 2012. Patients with chemotherapy before surgery were excluded. Lymphadenectomy D1,5 was performed for each patient. Histology results was retrospectively obtained from the electronic patient file. Results: Ten patients (mean age=55.4, 4 women, 6 men) underwent surgery for adenocarcinoma T1 with signet ring cells, from 2000 to 2012. Three patients underwent endoscopic resection before surgery. Mean size of the lesions was 20.2mm [5-35mm]. Seven lesions were located in antrum, 3 in fundus. Height lesions had diffused signet ring cells, 2 isolated signet ring cells. Endoscopic aspect was defined as protruded in one case (0-IIa), excaved in 7 cases (2 0-IIb, 3 O-IIc, 2 O-III), unknown in 2 cases. There were not lymphovascular involvement for 8 patients on histology. No of these 8 patients presented lymph nodes invasion. Five patients had intra-mucosal carcinoma, 4 were classified Sm1, one patient Sm2. Patients with lymphovascular invasion (2) had lymph nodes metastasis on surgical peace. One patient was Sm1, the other Sm2. None patient with intramucosal cancer and no lymphovascular invasion, had lymph nodes involvement on surgical peace. Conclusions: Despite the fact, definitions of EGC can be differ between East and West, despite the fact East and West populations are not superposable, gastrectomy should not be systematic for EGC with signet ring cells and endoscopic resection should be discussed.

<table>
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<tr>
<th>Endoscopist</th>
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<th>GOJ</th>
<th>Cardia</th>
<th>Upper body</th>
<th>Incisura</th>
<th>Antrum</th>
<th>Duodenal bulb</th>
<th>D2</th>
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<td>25.8 (18/70)</td>
<td>12.9 (9/70)</td>
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<td>10.0 (7/70)</td>
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<td>66.7 (12/18)</td>
<td>100 (9/9)</td>
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</table>

Table 1 (Abstract 5): detailed analysis of images recorded at gastroscopy

5. RETROSPECTIVE ANALYSIS OF IMAGE DOCUMENTATION IN GASTROSCOPY

V. Appleby, M. Sprakes, D. Vani, S. Shah
Digestive Diseases Centre, Pinderfields General Hospital

Objective of the study: Demand for quality control in endoscopic procedures is gaining force. In response to this the European Society of Gastrointestinal Endoscopy have created a checklist of images which are to be obtained during gastroscopy. This ensures that adequate examination of the upper gastrointestinal tract has been documented. The aim of this study is to audit current practice in a large non-tertiary endoscopy unit. Methods: Retrospective analysis of images recorded during 248 gastroscopies was performed over a six week period. The total number of images obtained was recorded in addition to location, clarity of image (determined by a designation of clear or unclear) and specialty of endoscopist. The eight locations assessed were upper oesophagus, gastro-oesophageal junction (GOJ), cardia, upper body of stomach, incisura, antrum, duodenal bulb, and second part of duodenum (D2). Results: There were 2033 images recorded during 248 gastroscopy procedures. Fifty seven procedures had no image documentation. Seventy procedures were performed by surgical endoscopists, and 178 were performed by physician endoscopists. The mean number images taken by surgeons was 5.3 (range 0-27) per procedure, and 11.2 (range 0-52) by physicians. Of the 2033 images taken clarity of image ranged from 100% at the cardia and upper oesophagus to 21.3% at the incisura (Table 1). Conclusions: Image documentation at gastroscopy is inconsistent with poor adherence to ESGE guidelines. In cases when no images were recorded there was poor documentation as to the reason why. A large proportion of images were unclear either due to poor picture clarity, poor illumination or lack of adequate insufflation of the lumen. In the era of increased image documentation, considerations regarding the time implications of obtaining eight clear images, the storage capacity of endoscopy reporting systems, and patient satisfaction levels due to potential increases in procedure length need taking into account. We plan to re-audit following education in our local endoscopy unit to reassess standards in image documentation.
6. EARLY GASTRIC CANCER ON THE BACKGROUND OF ATROPHIC GASTRITIS

Alexander B. Averbach

Objective of the study: The association of Barrett’s oesophagus with the development of esophageal adenocarcinoma is well established, with risk increasing with the length of the lesion and presence and degree of dysplasia. It is not finally determined the importance of gastric and intestinal metaplasia in this process.

Methods: We used methylene blue 0.25% solution in order to determine the presence of intestinal metaplasia and dysplasia in patients with endoscopically suspected Barrett’s oesophagus and accompanied precise biopsy which was followed by standard Seattle-protocol biopsy. This screening protocol was established 3 years ago in our region and to the moment it was examined 83 patients and their medical charts were retrospectively reviewed.

All patients were divided in 2 groups: short-segment (total length < 3 cm) and long-segment (≥ 3 cm) Barrett’s oesophagus. As the length of Barrett’s oesophagus it was measured the maximum extension of C- either M-segments according to Prague classification.

Results: The age of patients ranged from 19 to 80 years. It was equal amount of male (42) and women (41) in the sample and endoscopic forms of Barrett’s oesophagus were almost evenly distributed between them: 28.6% long-segment in men and 22% in women. Among all 83 patients 59 had short-segment and 24 – long-segment. It was no difference in prevalence of histologically confirmed intestinal metaplasia between these 2 groups (p>0.05) - 45.8% in long-segment and 40.7% in short-segment. Gastric type of metaplasia was revealed in the rest of patients. The rate of dysplasia (all cases were mild) was significantly higher (p<0.05) in patients with long-segment Barrett’s oesophagus – 29.2% versus 0.5% in short-segment. Of note that dysplasia in whole sample of patients was associated with intestinal metaplasia only in 50% of cases.

Conclusions: As medical resources are not unlimited it is important to pay more attention to patient with long-segment Barrett’s oesophagus but not only with intestinal metaplasia, it is worthwhile to include in screening programs patients with gastric metaplasia as well.

7. EARLY GASTRIC CANCER ON THE BACKGROUND OF ATROPHIC GASTRITIS

A. A. Filin

Objective of the study: To improve diagnostics of early gastric cancer in atrophic gastritis as a precancerous condition.

Methods: A patient of 71, male, underwent routine endoscopic examination in 2009. Moderate atrophic gastritis was diagnosed by biopsy. Patient also suffered from obstructive lung disease, ischemic heart disease, benign hyperplasia of prostatica. Follow-up endoscopy recommended. In 2012 follow-up upper GI endoscopy revealed severe atrophic gastritis with intestinal metaplasia, OLGA III.

Results: The final pathological data revealed well-differentiated adenocarcinoma in situ. We performed ESD to remove this lesion. A slight bleeding occurred on the 1st day after procedure, treated endoscopically. Also post-ESD period was complicated by acute urine bloc and transient abdominal pain, treated successfully. The patient was discharged from hospital on the 14th day.

Conclusions: Patients with precancerous conditions and lesions should undergo endoscopic follow-up examinations (including modern methods and techniques and patological study). Development of register of patients with precancerous conditions and lesions of stomach can improve the revealing of early gastric cancer.

8. ENDOSCOPIC RESECTION OF FOCAL LESIONS IN BARRETT’S OESOPHAGUS: A SINGLE CENTRE EXPERIENCE

M. Wapp, R. Vajczik, M. Haefner, Department of Internal Medicine, St. Elisabeth Hospital Vienna, Vienna, Austria

Objective of the study: Endoscopic resection of Barrett’s oesophagus has become standard in the treatment of focal early neoplasia. We report on the results, complications and outcome of patients referred to a non-academic centre for endoscopic mucosal resection (EMR) of focal lesions in Barrett’s oesophagus.

Methods: Between February 2010 and January 2013 a total of 24 patients (11 female, 13 male, mean age: 61 years) were referred for endoscopic resection of focal lesions in Barrett’s oesophagus.

Results: We performed cap-EMR in 22 cases and EMR after submucosal injection using a standard snare in 2 cases. Based on prior biopsy, indications for resection included LGIEN (n=2), HIEN (n=10) and mucosal carcinoma (n=3). In 9 cases, presence of a focal lesion at surveillance endoscopy led to endoscopic resection. All procedures were performed under deep sedation using propofol.

Conclusions: All lesions could be resected successfully. 2 patients with invasive cancer were referred to surgery because of high risk lesions (one sm3 lesion and one m2 lesion with lymph vessel invasion). Minor bleeding occurred in 12 cases (50%), all bleedings were treated successfully endoscopically. No perforation occurred. Pre-EMR histology based on prior biopsy was available in 15 cases. Among those patients final diagnosis based on the resected specimen differed in 8 cases (53%) from the initial diagnosis. Final diagnosis was adenocarcinoma (n=7), HIEN (n=7), LGIEN (n=5), no dysplasia (n=4) and 1 case without Barrett’s mucosa. All patients were treated successfully. The mean follow-up period so far.

Conclusions: Endoscopic mucosal resection is an established method for the treatment of focal lesions in Barrett’s oesophagus. Our data show that a small specialized centre can perform a reasonable amount of procedures yielding good results. Staging of Barrett’s oesophagus can be challenging based on biopsies. In 8 out of 15 patients (53%) the final diagnosis was different from the one leading to endoscopic intervention. Most notably, 3/6 cases of Barrett’s with HIEN turned out to be Barrett’s carcinoma after resection. This is in accordance with a recently published study showing that Barrett’s carcinoma is frequently understaged as HIEN.

9. BARRETT’S NEOPLASIA IS COMMON IN SHORT AND ULTRA SHORT SEGMENTS AND WARRANTS APPROPRIATE SURVEILLANCE

Revital Kariv, Raphael Bruck, Sigal Fishman, Michal Nissim, Zamir Halpern, Erwin SantodDepartment of Gastroenterology and Liver Disease, Tel Aviv Sourasky Medical Center

Objective of the study: Dysplasia in Barrett’s oesophagus (BE) has been claimed to be less frequent in short segment BE and rare in ultra short-segment BE (USBE). Endoscopic surveillance is typically not advocated for USBE. We evaluated our 4.5 years consecutive BE case cohort for cases with dysplasia.

Methods: We prospectively recorded medical and endoscopic evaluation of BE patients in a tertiary referral center in Tel Aviv. Surveillance is conducted according to AGA guidelines with Pentax HD endoscopes and ISCAN, together with acetic acid application. Biopsies are evaluated by an expert GI pathologist. Patients with non-flat focal lesions underwent endoscopic mucosal resection (EMR) for staging and then radiofrequency ablation (RFA) and those with flat high grade dysplasia - RFA.

Results: 324 patients with BE were enrolled to the database between 5/2008-12/2012. BE was documented as long segment for 69 (>3cm), 116 documented with short BE(1<3cm) and 42 with USBE(≤1cm).

31 patients were found with any degree of dysplasia, the worst neoplastic diagnosis was determined as: indefinite for dysplasia in...
10. CONVENTIONAL WHITE LIGHT ENDOSCOPY FINDINGS IN HIGH RISK GROUP PATIENTS WITH CHANGED PEPSONGEN TESTS.
Ilze Kikuste 1,2, Anita Lapina 1, Konrads Funka 1,2, Alids Rutkis 2, Herberts Kurs 1, Viktors Saule 2, Pctavls Janovics 1,2,3, Marcis Leja 1,2
1 University of Latvia 2 Riga East University Hospital 3 Riga Stradins University

Objective of the study: The aim of the study was to assess conventional white light gastroscopy findings in patients with changed serum pepsinogen tests (high risk group).

Methods: The obtained data testify the method of magnifying endoscopy with narrow-band imaging as highly informative in the diagnosis of precancerous conditions of GM. Key words: endoscopy with narrow-band imaging, endoscopy with magnifying function, gastric mucosa, intestinal metaplasia, endoscopy.

11. MAGNIFYING ENDOSCOPY WITH NARROW-BAND IMAGING IN THE DIAGNOSIS OF PRECANCEROUS CONDITIONS OF GASTRIC MUCOSA
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The All-Russian Center of Emergency and Radiation Medicine of Ministry of Emergency Situations, Russia, Saint Petersburg

Objective of the study: To estimate the opportunity of magnifying endoscopy with narrow-band imaging in the diagnosis (NBI-ME) of atrophy and intestinal metaplasia (IM) of gastric mucosa (GM).

Methods: The analysis of routine endoscopy examinations of 203 patients, NBI-ME examinations of 183 patients and endoscopy with the use of chromoscopy in 114 patients in comparison with histological conclusion was performed.

Results: On routine endoscopy examination the identification frequency of GM atrophy amounted to 24.1 %, the IM frequency did not exceed 2 %. Histological verification of the material of GM biopsies determined atrophy in 38.4 % of cases, and IM – in 28.6%. The coincidence of the histological and endoscopic detection amounted to 62.8 % in GM atrophy and 6.9 % in IM. Chromoscopy with 0.5% methylene blue solution increased frequency of endoscopic detection of IM to 18.4 %, with unreliable trend of more frequent IM detection (33.3 %) according to the morphological study. The coincidence of endoscopic and histological conclusion amounted to 55.3 %. On the NBI-ME examination a significant increase of IM identifying to 42.1 % was noted, with unreliable exceeding of it detection frequency by morphological method (49,7%). The coincidence of endoscopic and histological diagnoses was 84,6%. The detection frequency of GM atrophy increased to 38.8%, with the coincidence of diagnoses amounting to 93.4%.

Conclusions: The obtained data testify the method of magnifying endoscopy with narrow-band imaging as highly informative in the diagnosis of precancerous conditions of GM. Key words: endoscopy with narrow-band imaging, endoscopy with magnifying function, gastric mucosa, intestinal metaplasia, chromoscopy.

12. EPIDEMIOLOGICAL AND ENDOSCOPIC FINDINGS ON ESOPHAGEAL CANCER IN ALBANIAN POPULATION
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University Service of Gastrohepatology
University Hospital Center Mother Theresa, Tirana, Albania

Objective of the study: Despite the progress in its diagnosis and therapy, esophageal cancer (EC) remains a serious condition with a poor prognosis and high mortality rate. The main histologic types of esophageal cancer are squamous cell carcinoma (SCC) and adenocarcinoma (ACE). The aim of this report is to provide information about some epidemiological characteristics, endoscopic and histological data on EC in Albanian population.

Methods: A retrospective study based on 6.052 upper endoscopy performed during a three years period (2008-2010) on inpatients and outpatients residing in the whole Albanian territory. 115 patients diagnosed with EC, according to endoscopic and histologic diagnostic criteria were enrolled in this study. The epidemiological, clinical and endoscopic data were recorded for all patients.

Results: During the study period the rate of EC on regard of endoscopy patients tended to increased (0.55% in 2008; 0.72% in 2009; 0.73% in 2010). The median age at diagnosis was 61.0 year, mean age 58.02 ± 12.16 years (male 56.95±14.58 years; female 52.33±15.42 years). EC was predominant on the age-groups of 61-70 years (54/115). The predominance of male patients is high (M:F=3.6:1). Dysphagia (75.5%), weight loss (71.4%) and gastrointestinal reflux (49%) were the most common symptoms. 56 (48.6%) of tumors were founded in the cardio-esophageal region; 59 (51.3%) were noncardio-esophageal tumors. ACE was diagnosed in 63 (55%) of patients; SCC was diagnosed in 52 (45%) of patients. There was a association between smoking and alcohol consumption with both histologic types, but only smoking has a significant relationship (for SCE: 63% smoking vs. 37% non smoking; for ACE: 54% smoking vs. 46% non smoking; p<0.01, respectively).

Table 1. Conventional white light gastroscopy findings

<table>
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<tr>
<td>Esophagitis</td>
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</tr>
<tr>
<td>Hiatal hernia</td>
<td>9</td>
</tr>
<tr>
<td>Gastropathy (hyperemic)</td>
<td>71</td>
</tr>
<tr>
<td>Gastropathy (erosive)</td>
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<tr>
<td>Gastric atrophy</td>
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<tr>
<td>Metaplasia</td>
<td>2</td>
</tr>
<tr>
<td>Gastric ulcer</td>
<td>3</td>
</tr>
</tbody>
</table>

Table 1. Conventional white light gastroscopy findings

Of the 19 patients with endoscopic signs of atrophy (90%) were confirmed by histology, in 14 patients (74 %) mild (OLGA stage I) and in 3 (16%) patients moderate (OLGA II) atrophy. Moreover 54 patients (67%) of endoscopically negative patients (n=81) were diagnosed gastric mucosa atrophy histologically (47 (87%) =OLGA I, 6 (11%) = OLGA II and 1 (2%)= OLGA III. The negative predictive value (NPV) = 34%. The sensitivity and specificity of endoscopy for the diagnosis of atrophy based on histological diagnosis of atrophy were 57.7% and 93.5%.

Conclusions: Conventional white light endoscopy cannot accurately diagnose atrophic gastritis in patients with changed serum pepsinogen tests (high risk group).
13. TO SELECT THE THERAPIES IN GASTRIC CARCINOID TUMORS
Kurokawa, Sei, Japan

Objective of the study: Gastric carcinoid tumors are very rare tumors, the constant opinion is not obtained about the therapy. We estimate future treatment strategy from the clinicopathologic evidence of gastric carcinoid tumors which we experienced in our hospital.

Methods: Retrospective analysis of 7 patients from 2006 to 2012 in our hospital.

Results: All of the indications for upper endoscopy were medical examination. Gender, the mean age of patients were 5(Male): 2(female), 60.7±16.1. Gastric carcinoid type 1 tumors were 3 patients, type 3 were 4 patients. The mean number of lesions, maximum tumoral diameter, and percentage of cells expressing Ki-67 labeling index were 1.57±13, 7.5±2.7 mm and 2.1±1.0% respectively. The mean serum gastrin levels of type 1 were 1850 pg/dl. As for the therapy every type category, for as type 1, two distal gastrectomy, total gastrectomy one, type 3 were two distal gastrectomy, ESD case, follow-up one. One lymph node metastasis was detected. We survive without all cases recurrence for 42.3±27.8 months for the mean observation period.

Conclusions: The conventional carcinoid tumor came to be named generally by WHO classification of 2010 with Neuroendocrine tumor (NET). The type 1 case chose surgery for a multiple lesion, hypergastrinemia. The case which we locally excised in ESD included type 3 case, but the G2 case that the proliferation potency of cells was high showed lymph node metastases. It seems that the NET needs therapy choice on having evaluated the proliferation potency of cells.

14. CANCER RISK ASSESSMENT SYSTEM OF VASCULAR AND SURFACE PATTERNS USING HIGH-MAGNIFICATION ENDOSCOPY (HME) AND NARROW-BAND IMAGING (NBI) IN GASTRIC LESIONS: THE ALGORITHM FOR COMPUTER-AIDED PATHOLOGY PREDICTION IN STOMACH
S. Kashin1, R. Kuvaev1, A. Nadezhin1, V. Kapranov2, H. Edelsbrunner3, M. Machin1, O. Dunaeva2, A. Rusakov2
1 Yaroslavl Regional Cancer Hospital; 2 P.G. Demidov Yaroslavl State University; 3 Institute of Science and Technology Austria (IST Austria)

Objective of the study: HME with NBI is currently applied for visualization of microsurface pattern and microvasculature of gastric lesions. Moreover application of HME with NBI requires training and experience. Newly developed computer-aided diagnostic systems in endoscopy aim to prediction of pathologies and thus to assist an expert in improving the accuracy of diagnosis. However the algorithm based on effective and suitable classification system is needed for functioning of such systems.

Methods: The aim of the study was to assess a cancer risk in gastric lesions with different types of vascular and surface patterns and create an algorithm for computer-aided diagnostic system. 148 gastric lesions in 134 patients (mean age 58.9 years, SD=13.4) were observed with NBI-HME (GIF-Q260Z, Olympus Exera). V- and S-patterns were assessed independently according to the most useful criteria of known classifications. V-pattern: regular (RV) type (closed-loop (c.l.) and open-loop(o.l.) and irregular (IV) type (c.l. and o.l.). S-pattern: regular (RS - oval, tubular, villous), irregular (IS) and absent (AS). Biopsies were taken for histological assessment.

Results: 8 of 20 possible V- and S-pattern combinations were defined; the rest of them were not identified in the present study. The results are summarized in the table. Three cancer risk groups were distinguished: low (RV+RS), adenocarcinoma (AC) was identified in 0%), moderate (RV(o.l.)+IS and IV+IS, AC was identified in 30-42.8%) and high (IV+AS, AC was identified in 89.7-91.7%).

Conclusions: Cancer risk assessment system could be the basis of computer-aided analysis of endoscopic magnifying images for effective cancer risk prediction of gastric lesions. Nevertheless future studies need to be conducted for evaluation of the effectiveness of computer-aided pathology prediction systems in medical endoscopy.

15. ROLE OF AUTOFLUORESCENCE IMAGING (AFI) ENDOSCOPY IN DETECTION OF GASTRIC LESIONS.
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2 Gastroenterology, Central Clinical Hospital of the Russian President Administration, Moscow, Russia

Objective of the study: ‘Red flag’ techniques are imaging technologies that allow scanning a wide area of mucosa for detecting suspect lesions. The candidates for this technology include AFI and chromoendoscopy (CE) with indigo-carmine. However the optimal ‘red flag’ method hasn’t been established yet.

Methods: The aim was to determine the efficacy of AFI and CE in detection of gastric lesions. This study comprised 68 lesions in 51 patients (pts). Initially all pts was investigated by standard endoscopy combined with CE (Olympus Exera II GIF H180). Afterwards these pts was examined by AFI (Olympus Luctera GIF-FQ 260Z). Finally all detected lesions were observed by using narrow-band imaging and high-magnification endoscopy (Olympus Luctera GIF-FQ 260Z). AFI-positive lesions divided to purple in green (P/G) and green in purple (G/P). Irregular microvascular pattern (IMVP) with irregular (IMSP) or absence (AMSP) microstructure pattern was used as the criterion of neoplasia. Biopsies were taken from all lesions for histological assessment.

Results: From 68 detected lesions there were 65 AFI-positive lesions (53 (81.54%) P/G-pattern and 12 (18.46%) G/P-pattern) and 3 AFI-negative lesions (2 neoplastic, 1 nonneoplastic) detected with only WLE with CE. P/G-pattern included 25 (47.17%) nonneoplastic (chronic gastritis, intestinal metaplasia, hyperplasia) and 28 (52.83%) neoplastic (LGD, HGD, adenocarcinoma, ring-cell cancer) lesions (n.s.). G/P-pattern included 5 (41.67%) nonneoplastic and 7 (58.33%) neoplastic lesions (n.s.). In all detected lesions IMSP/AMSP with IMVP were found in 20 cases (19 neoplastic and 1 nonneoplastic) from analysis by HME.

Conclusions: Both AFI and CE demonstrated high sensitivity (94.87% and 97.36% respectively) but low specificity (both 50.82%). It can be used as ‘red-flag’ technique to detect suspected lesions for further detailed inspection with NBI-HME. Addition of the third method – HME-NBI can increase specificity on 45.95%. Combination of AFI with NBI-HME known as trimodal endoscopy may increase detection rate of early cancer lesions.
16. IMPACT OF BORRMANN CLASSIFICATION IN GASTRIC CARDIA CANCER PROGNOSTICATION
N. Lukavetskyj, T. Fetsych
Oncology department, Lviv Medical University

Objective of the study: Gastric cancer can be classified endoscopically according to the growth pattern. Surgical resection is the most effective treatment for curable gastric cancer. The aim of our study is to evaluate the impact of Borrmann classification in prognosis of gastric cardia cancer patients.

Methods: We performed retrospective review of the clinical records of all patients with gastric cardia cancer which was surgically (R0) treated in 2002-2011 years in our department (135 patients). Different surgical techniques were used: transabdominal proximal, total or extended gastrectomy in 56,3% patients (abdominal group), transabdominal proximal or total gastrectomy and left thoracotomic esophageal resection in 43,7% patients (thoracotomy group). All patients received systemic lymphadenectomy, none of the patient received preoperative chemo and/or radiotherapy. Survival rates were calculated according to the Kaplan–Meier method.

Results: Median survival (p=0.5) was 19 months for patients with polyloid cancer, 15,5 months for patients with ulcerated cancer, 16 months for patients with infiltrative cancer and 18 months for patients with fungating type of cancer.

The infiltrative and ulcerated types of cancer were 43,8% in abdominal group of patients, significantly lower than in thoracotomy group – 61,4% (p<0.05). The median survival rate of patients after abdominal surgery without thoracotomy was significantly lower than that of patients with thoracotomy (p=0.03627).

Conclusions: Our results show that type of tumor growth according to the Borrmann classification don’t have impact on prognosis in gastric cardia cancer patients. But accurate endoscopy is important to plan therapeutic strategies and appropriate surgical treatment in patients with advanced gastric cardia cancer.

17. ENDOSCOPIC DIAGNOSTIC AND TREATMENT OF EARLY GASTRIC CANCER WITH PRIMARY MULTIPLE CANCER
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Introduction: Primary–multiple cancers are divided into synchronous and metachronous. In case of lung cancer a colon cancer occurs in 16% of cases, and stomach cancer develops in 16% of cases, and in a combination with ZOOM. Diagnostic biopsy showed high accuracy in sampling Barrett’s esophagus (BE). It remains controversial whether the use of “jumbo” forceps provides an advantage compared to standard or large capacity biopsy forceps. In addition, no study compared different types of large capacity forceps.

Objective of the study: To assess sampling quality of 4 different forceps (3 large capacity and 1 jumbo) in patients with BE.

Methods: A single center, randomized and prospective study. Twenty nine patients (5 women, 24 men) were enrolled. The following forceps were tested: A: disposable large capacity biopsy forceps FB-240K with spike, outer diameter 2.45 mm; B: disposable large capacity biopsy forceps BI01-D3-23 with spike, outer diameter 2.3 mm; C: single-use biopsy forceps Radial Jaw 4 with spike, outer diameter 2.8 mm (jumbo) and D: single-use large capacity biopsy forceps with spike, outer diameter 2.3 mm. All patients underwent an upper GI endoscopy with trimodal imaging (ZOOM, AFI, NBI). Targeted and random biopsies with all 4 forces (in a random order) were obtained from every patient during a single endoscopy using a diagnostic endoscope (with a standard channel of 2.8 mm). The samples were analyzed by a blinded experienced pathologist. Main outcome measurement was specimen adequacy (defined as a well oriented biopsy sample 2 mm or greater with muscularis mucosa present).

Results: A total of 311 biopsy samples were analyzed (forceps A: 89, forceps B: 85, forceps C: 63, forceps D: 62). Compared to all other forces, a significantly higher proportion of biopsy samples with jumbo forceps (“C”) were adequate (A: 24%, B: 21%, C: 73%, D: 18%; p<0.001 C vs. other forces). Biopsies with jumbo forceps (“C”) had the largest diameter (median 2.4 mm vs 1.7 mm (A), 1.5 mm (B) and 1.8 mm (D); p<0.001 C vs other forces). Muscularis mucosae was detected in 58% of specimen with forceps A, in 28% with forceps B, in 82% with forceps C and in 52% with forceps D (p<0.001 C vs other forces; p<0.009 A, D vs B). Excellent or good specimen orientation was present in 64% of samples with forceps A, in 58% with forceps B, in 78% with forceps C and in 81% with forceps D (p<0.007 C vs other forces; p<0.009 A, D vs B). Diagnostic yield among 4 forces tested did not significantly differ.

Conclusions: Jumbo biopsy forceps provides more adequate specimen as compared to three types of large capacity forces. Whether such an advantage leads to a better detection of early neoplasia in patients with BE, is not clear.

19. TARGETED BIOPSIES ARE NOT ACCURATE ENOUGH FOR CORRECT DIAGNOSIS OF EARLY ESOPHAGEAL NEOPLASIA
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Introduction: Endoscopic resection (ER) is a method of treatment of early esophageal neoplasia if a visible lesion is present. Radiofrequency ablation (RFA) is indicated for patients with high grade intraepithelial neoplasia (HGIN) without visible lesions. However, it is not clear, whether the targeted biopsies are sufficient for definitive diagnosis of early esophageal neoplasia, especially in the patients without a visible lesion.

Objective of the study: To compare diagnostic yield of targeted biopsies compared with ER in patients with early esophageal neoplasia. The main outcome measurement was a revision /review of histopathological stage.

Methods: A total of 59 patients (7 women, 52 men, mean age 63 years, range 34-85) undergoing both targeted esophageal biopsies and ER (n=53) or ESD (n=1) were analyzed. Index diagnosis according to the biopsy specimen was as follows: 14x early carcinoma (EC) (13x adenocarcinoma, 1x squamous carcinoma), 26x HGIN (25x adenomatous, 1x squamous), 15x low grade intraepithelial neoplasia (LGIN, all adenomatous), 3x hyperplastic lesion and 1x papilloma. The lesions were classified according to the Paris classification: O-Ia 4x, O-IIa 28x, O-IIb 24x, O-IIa+IIc 3x. In most of the cases, ER with multiband ligation device was used. All histopathological specimens were analyzed by an experienced pathologist.

Results: Compared to prior forceps biopsy, histopathology from ER specimen changed in 24 patients (40%). All carcinomas
diagnosed from biopsies were confirmed in ER specimens. Among 26 patients with HGIN, the diagnosis was confirmed in 8 patients. In 10 patients, the final diagnosis has been up-staged from HGIN to cancer (4 patients had a flat lesion lib). In 8 patients, the final diagnosis has been down-staged from HGIN to LGIN or to no intraepithelial neoplasia. Among 15 patients with LGIN, the diagnosis was confirmed in 10 patients, up-staged from LGIN to HGIN in 1 patient and to cancer in 2 patients, down-staged from LGIN to no intraepithelial neoplasia in 2 patients. The sensitivity of biopsies for cancer diagnosing was 0.54 (95%CI 0.3-0.72) and the specificity was 1.0 (95%CI 0.9-1).

Conclusions: Targeted biopsies are not accurate enough for precise diagnosis of early esophageal neoplasia. There is a clinically significant change in histopathological diagnosis after ER. RFA treatment should be indicated cautiously in patients without a visible lesion and with HGIN diagnosed using standard biopsies.

20. CORRELATION OF ENDOSCOPIC SEVERITY OF EROSIVE GASTROESOPHAGEAL REFUX DISEASE (GERD) WITH BODY MASS INDEX (BMI)
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Background: Gastro esophageal reflux disease (GERD) is a spectrum of disease with classic symptoms of heart burn and acid regurgitation, at one end, without any evidence of esophageal mucosal injury, and erosive esophagitis, complications of Barrett’s esophagus and esophageal adenocarcinoma at other end. Obesity is widely regarded as a pandemic with potentially disastrous consequences for human health. To date, many studies have reported on the association of obesity with gastro esophageal reflux disease (GERD). In light of this, we conducted this study to examine the association of obesity and erosive GERD.

Objective of the study: To assess the correlation of endoscopic severity of erosive gastro esophageal reflux disease (GERD) with body mass index (BMI).

Design: Cross sectional analytic study.

Setting: Baghdad teaching hospital/Baghdad from April 2010 to February 2011.

Methods: 100 untreated Patients with erosive GERD, on endoscopic examination, had been presented with typical symptom of GERD (heart burn and acid regurgitation). Classification of erosive GERD severity had been done according to Savary-Miller classification system. Body mass index (BMI) was calculated as body weight in kilogram (KG) divided by square of the body height in meter (m2). Patients were analyzed by using (SPSS17) statistical software. We used Spearman correlation coefficient (r) test (which measures how well the relationship between two variables can be described by a monotonic function). P value <0.05 statistically significant.

Results: The mean BMI of patient’s group who had grade 1 GERD (48 patients) was 25.09 kg/m² ± 4.248 SD , and of those with grade 2 GERD (36 patients) BMI was 34.45 kg/m² ± 4.665 SD , while those with grade 3 GERD (14 patients) BMI was 38.55 kg/m² ± 4.245 SD and finally of those with grade 4 GERD (2 patients) BMI was 40.55 kg/m² ± 4.879 SD, with significant statistical P value 0.000 measured by spearman correlation coefficient (r) test. This finding suggest that obesity and increased BMI is a risk factor for more serious mucosal lesion in the esophagus and will increase possibilities of complication of higher grade of GERD.

Conclusions: Higher body mass index (BMI) seems to be associated with higher degree of endoscopic erosive GERD severity.

21. EPIDEMIOLOGY, MANAGEMENT AND PROGNOSIS OF PERIAMPUTARY TUMORS IN PAKISTAN
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Objective of the study: Cancer of the papilla of Vater is a relatively rare disease. The aim of the study was to determine its presentation and outcome amongst the Pakistani population.

Methods: This study was carried out at The Fatima Memorial Hospital, Lahore as a retrospective case series in which twenty eight patients (M=15, F=13) of suspected periamputary tumors referred for ERCP (Endoscopic Retrograde Cholangiopancreatography) from November 2006 to November 2009 was reviewed. These patients were followed up for a variable period of one year or longer. Most of these patients presented with symptoms of jaundice, epigastric pain and weight loss. ERCP was performed on all twenty eight patients and their biopsies were sent for histopathology.

Results: Out of the twenty eight cases, thirteen (M=5, F=8) were proven to have cancer (adenocarcinoma of the ampulla). The average age of presentation of the male patients was 67.4 years and the female patients presented at an average age of 51.8 years. Out of the thirteen patients 5 (M=2, F=3) are still alive whereas 8 (M=3, F=5) patients expired. Therapeutic Stenting was performed on all thirteen cases and 6 cases (M=2, F=4) were operated upon. Three patients (M=1, F=2) who were operated upon survived for a period of 1 year and three patients died within a year of operation. Amongst the 7 unoperated cases 2 (M=1, F=1) are alive to date whereas 5 (M=2, F=3) patients expired within a time frame of five months to two years. The mean time of survival from the date of diagnosis was 0.9 years. The estimated 1 year survival rate was 46.15% and the 2 year survival rate was 15.38%.

Conclusions: Periamputary tumors are diagnosed at an advanced stage in Pakistan so their prognosis remains grave despite therapeutic and surgical interventions.

22. A FORMAL SURVEILLANCE PROGRAM WITH DEDICATED ENDSOCOPY LISTS IS REQUIRED TO IMPROVE COMPLIANCE WITH THE BRITISH SOCIETY OF GASTROENTEROLOGY (BSG) GUIDELINES FOR DIAGNOSIS AND MANAGEMENT OF BARRETT’S COLUMNAR-LINED ESOPHAGUS
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Objective of the study: Endoscopic surveillance of Barrett’s oesophagus is recommended to detect progression to adenocarcinoma at an earlier stage. We intended to audit Aneurin Bevan Health Board (ABHB) compliance with the 2005 British Society of Gastroenterology (BSG) guidelines for the diagnosis and management of Barrett’s columnar-lined esophagus.

Methods: Aneurin Bevan Health Board electronic prospective histopathological database was searched to identify all cases coded as Barrett’s oesophagus (BO) during the period from 2005 to 2011. Endoscopy reports of all patients were matched with histology reports. A retrospective registry was then constructed including demographics, clinico-pathological features, modes and rates of follow-up, pathological progression and incident cancer rate during the study period.

Results: A total of 773 cases were coded as BO during the period 2005 to 2011. Interrogation of all records confirmed 620 cases to be worthy of inclusion excluding 153 cases due to inadequate data or incorrect coding. The 620 cohort of patients consisted of 406 males and 214 females with a median age of 65 years (range 20 to 97 years). BO histological confirmation was attained in 592/620 cases at index endoscopy and during a follow-up endoscopy in 28/620 cases. Intestinal metaplasia was reported in 851/620 cases. Dysplasia was diagnosed in 58/620 cases at index endoscopy; 16/620 of these index cases were reported as indefinite for dysplasia, 32/620 were low grade dysplasia and 10/620 were classified as high grade dysplasia. 233/620 (37.6%) patients had on average one follow-up and 100/620 (16.1%) had two or more follow ups during the study period.

Conclusions: Compliance with BSG follow-up recommendations and other practice parameters is poor. We recommend a formal surveillance program with dedicated endoscopy lists to improve compliance and permit a meaningful assessment of the clinical and cost effectiveness of such strategy.
23. NEOADJUVANT CHEMORADIOThERAPY IN LOCALLY ADVANCED ESOPHAGEAL CANCER
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Objective of the study: Neoadjuvant chemoradiotherapy followed by esophagectomy has been established as standard of care for locally advanced esophageal cancer.

The goal of this paper is to present our experience in treating locally advanced esophageal cancer with two-modality therapy.

Methods: A group of sixty-two patients with histopathologically proven locally advanced (T 3-4, N+) squamous cell esophageal cancer were enrolled. Baseline CT scan, upper GI endoscopy, CBC and lab. analyses with tumor markers were performed.

Radiotherapy (45-50.4 Gy) was delivered concomitantly with 5FU-CDDP chemotherapy (every two weeks Cisplatin 50 mg/m2 D1, folinic acid 20 mg/m2 D1-D2, bolus 5FU 400 mg/m2 D1-D2, continuous (22h) 5FU 600 mg/m2 D1-D2). Three to four cycles of chemotherapy were applied. Treatment response was assessed by CT scan and upper GI endoscopy six weeks after completed CHRT. Patient who had good response and were fit for surgery underwent subsequent esophagectomy.

Results: Out of 62 patients enrolled (54 men, 8 women; median age 58), high-grade (G3-4) toxicity was recorded in 40% and planned doses of chemotherapy were not achieved in 21% of patients. Radiotherapy was interrupted in 37% of patients, from 7-52 days (med. 7 days). High grade toxicities were as follows: leucopenia 32%, febrile neutropenia 11%, dysphagia 8%, deep venous thrombosis 6.5%, cardiotoxicity 3%, anemia 3%, thrombocytopenia 1.5%, bleeding 1.5%, dermatitis 1.5%, upper respiratory tract infections 1.5%. Overall response rate was 48% (21% CR, 27% PR). Esophagectomy was performed in 23 patients (37%).

Conclusions: In our group of patients, neoadjuvant chemoradiotherapy was effective in complete remission or downstaging in 48% of patients and 37% underwent subsequent surgical resection. However, bimodality treatment was associated with 40% of high grade toxicities. To achieve maximum benefit and to minimize toxicities of neoadjuvant CHRT, we need to evaluate 5 year OS, optimize radiosensitizing chemotherapy and make appropriate selection of patients.

24. DOES STUDY METHODOLOGY IMPACT IN THE EVALUATED CANCER RISK OF BARRETT’S, ESOPHAGUS?
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Based on endoscopic studies, cancer risk in Barrett’s esophagus (BE) was accepted, for the last decade, to be around 0.5%. Recently, population-based studies have shown a lower risk, as low as 0.12%. In endoscopic-based studies, surveillance time (EST) is calculated from BE diagnosis to the last performed endoscopy or to adenocarcinoma (ADC) or o ADC/ high-grade dysplasia (HGD) diagnosis. In population-based studies, surveillance time (PST) is calculated from BE diagnosis to ADC or ADC/HGD diagnosis, death or the end of the study.

Objective of the study: To evaluate the incidence of ADC and ADC/HGD in a cohort of Portuguese BE patients using both EST and PST.

Non-dysplastic BE patients (columnar-lined esophagus of any length plus biopsies showing intestinal metaplasia) were prospectively surveilled with periodic upper-GI endoscopies according to the guidelines and biopsies according to Seattle protocol. Time of surveillance was either calculated from the last endoscopy (EST) or until death, ADC/HGD diagnosis and June 30th 2012 (TST) whatever occurred first. Patients with ADC/HGD were submitted to surgery or endoscopic resection/ablation. Cases diagnosed during the first year were excluded from the analysis.

Conclusions: In 331 BE patients (251M/80F), mean age 56.8 (21-87). Mean BE length 3.5 cm (1-16); 58% long segments (≥3cm); mean EST 6.2 years (1-27); mean PST 9.7 years (1-28); during follow-up 3 patients were lost (0.9%) and 71 deaths occurred (21.5%), only one related to esophageal ADC (0.3%). Incident ADC’s were diagnosed in 3 patients (2 T1sm under endoscopic surveillance and one stage IV, 6 years after leaving surveillance) and incident HGD in 5. Cancer risk using both EST and PST (total of 2064 and 3214 patient-years respectively) was 0.09% (95%CI 0.02-0.32 and 0.02-0.25 respectively). Pooled ADC/HGD incidence was 0.34% (95%CI 0.14-0.67) and 0.25% (95%CI 0.12-0.47) for EST and PST. In this cohort of non-dysplastic BE, both ADC and pooled ADC/HGD incidences were low and not influenced by the methodology used to calculate surveillance time.

25. CLINICAL AND ENDOSCOPIC PATTERNS ON GASTRIC CANCER IN KOSOVA POPULATION
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Introduction: The epidemiology of gastric cancer (GC) has been widely studied in the Western countries. However, only few reports from the developing counties have been published. There is a lack of descriptive data on GC from Kosova, a new developing country, where both cancer registration and prevalence of risk factors of gastric cancer are unknown.

Objective of the study: To evaluate the incidence of ADC and HGD in a cohort of Kosovar patients.

Methods: We studied 140 patients with gastric adenocarcinoma diagnosed at the Department of Gastroenterology, University Clinical Center of Kosovo, during 2008-2011. All the patients had histological confirmation of malignancy and status of H pylori infection. The staging was made in accordance with the TNM system. Epidemiological, clinical, endoscopic and histological data were analyzing for all patients. Statistical analysis was performed using SPSS version 11.0.

Results: 98 (70%) of patients were male and 42 (30%) were female. Median age was 62.12 ± 13.09 years with a range of 20-89 years. 95% of patients were H pylori positive. Distal localization was most common (112/140) and Borrmann type II and IV were commonest (129/140). Intestinal type was found in 68 % of the patients. There was evidence of a statistically significant relationship between Borrmann type and the presence of metastasis (p<0.01). According to TNM stage, the distribution of stages I, II, III and IV were 0% (0/140), 13.5% (19/140), 17.9% (25/140) and 68.6% (96/140) respectively.

Conclusions: Incal and endoscopic data of GC in our patients are similar with those in high-risk areas. Improvements of general sanitary conditions and control of H pylori infection are great potentials for the prevention of GC in our country.

26. GASTRO-ESOPHAGEAL REFUX DISEASE (GORD) SYMPTOMATOLOGY IS NOT A RELIABLE PREDICTOR OF ESOPHAGEAL ADENOCARCINOMA
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Objective of the study: Chronic gastro-oesophageal reflux disease (GORD) is considered a risk factor for development of gastro-oesophageal junction adenocarcinoma. Our aim is to determine the prevalence of GORD symptomatology and presence of Barrett’s columnar metaplasia prior to the development of distal oesophageal, gastro-oesophageal junction (GOJ) and gastric cardia adenocarcinoma at GCCD.

Methods: A prospective pilot study collected data from patients diagnosed with adenocarcinomas arising from the distal oesophagus, GOJ and cardia in one year. A standardized performance was designed to capture demographics, history of recurrent heartburn or regurgitation, clinicopathological and endoscopic data including the relationship of tumour epicenter with the distal end of the tubular oesophagus and the presence or absence of Barrett’s oesophagus. To avoid reversed causality, we disregarded symp- toms that occurred less than five years prior to cancer diagnosis.
HOW OFTEN DO WE TEST TISSUE TRANS-GLUTAMINASE ANTIBODY (TTG) PRIOR TO DUODENAL BIOPSY AT UPPER GASTROINTESTINAL ENDOSCOPY?

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Objectives of the study: Tissue trans-glutaminase antibody has a high diagnostic value in coeliac disease. In a series of biopsies of 2nd part of duodenum taken at upper GI endoscopy, we wanted to find out in what percentage of time TTG was sent pre-biopsy.

Methods: Details of 500 patients who had duodenal biopsies at upper GI endoscopy in 2012 were provided by the pathology department. Patients who had previously established coeliac disease or suspected malignancy were excluded (n=31). We collected data that included age of the patient, indication of the biopsy, findings at endoscopy and histology.

Results: Of the 469 biopsies included, 89% (n=416) were reported as normal at histological analysis and 11% (n=53) were reported as abnormal. 84% (n=45) of the abnormal biopsies were non-specific in nature. Only 11.3 % (n=6) of the abnormal biopsies were diagnosed as coeliac disease. A further 2 patients were diagnosed as coeliac disease after further clinical evaluation.

Of the 469 samples, 34% (n=161) of patients had TTG serology was sent prior to biopsy. Half (n=3) of those diagnosed with coeliac disease in this study had TTG done prior to biopsy. 1.7 % (n=8) of patients who had duodenal biopsies had a conclusive diagnosis of coeliac disease.

Only 0.4% (n=2) of patients who were TTG negative were diagnosed with coeliac disease based on histology and clinical correlation. There were no falsely positive TTGs.

Conclusions: 1/3 of patients had TTG checked prior to duodenal biopsy at upper GI endoscopy (UGIE). Coeliac disease was diagnosed at less than 2% of the time when duodenal biopsies were taken at UGIE.

ESOPHAGEAL CANCER BY SCREENING UPPER ENDOSCOPY DURING A ROUTINE HEALTH CHECK-UP

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Objective of the study: This study was performed to evaluate the extent, diagnostic and therapeutic results of esophageal cancer found by screening upper endoscopy during a routine health check-up.

Methods: Among 88,575 subjects presenting for screening upper endoscopy between 2003 and 2011, those with esophageal cancer were extracted using the pathologic results of upper endoscopic biopsy from the esophagus as the final subjects for this study. Wilcoxon rank sum test or Fisher’s exact test were used to test statistical differences.

Results: A total of 9 patients with esophageal cancer were detected. 7 patients had squamous cell carcinoma and 2 had adenocarcinoma. A depressed mucosal lesion about 1.0 cm size was the most common endoscopic finding of squamous cell carcinoma, however, a polypoid lesion in association with reflux esophagitis was the major finding of adenocarcinoma.

Conclusions: Though esophageal cancers were uncommon in Korean subjects, upper endoscopy may enable early detection of esophageal cancer in early stage. Esophageal adenocarcinoma may need more attention to be detected in earlier stage.

ENDOSONOGRAPHIC-GUIDED FINE NEEDLE ASPIRATION (EUS-FNA) VERSUS KEY-HOLE BIOPSY (KHB) IN DIAGNOSING GASTRIC SUBMUCOSAL TUMORS (SMTS) – A RANDOMIZED STUDY

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Objective of the study: Compare the yield and success of EUS-FNA and KHB in diagnosis of gastric SMTs.

Methods: Patients with endoscopically detected gastric SMTs with diameter ≥2 cm were randomly allocated to undergo either EUS-FNA or KHB with subsequent histological/cytological and immunohistochemical evaluation. In the case of failure of the primary diagnostic method, patients underwent the second method (crossover).

Results: A total of 20 patients (60% female, mean age 67.9 years), ten in each group, with gastric SMTs were enrolled in the study. Final tissue diagnosis was obtained in 19 (95%) patients across the crossover. The final diagnosis was established after the primary sampling in 17 (85%) patients. Primary tissue diagnosis was obtained in 90% (9/10) of patients in the EUS-FNA group and in 80% (8/10) in the KHB group. In the whole study group the final tissue diagnosis was: GIST (n = 12, 60%), Leiomyoma (n = 4, 20%), Lipoma (n = 1, 5%), MALT lymphoma (n = 1, 5%), and Adenocarcinoma (n = 1, 5%). In one patient (5%) no diagnosis was obtained. Of 12 patients with a diagnosis of GIST, four (33.3%) were in the KHB group a eight (66.7%) in the EUS-FNA group. Some mitotic activity (MA) could be evaluated in only 4 of 12 (33.3%) patients with GIST. In 1 of 8 patients (12.5%) in the EUS-FNA group and 3 of 4 patients (75%) in the KHB group MA was evaluated. Only 1 in 4 (25%) patients with evaluated mitotic activity, sufficient tissue sample was acquired to assess the number of mitoses in the required high power fields. No complication occurred.

Conclusions: 1) EUS-FNA and KHB are safe methods for obtaining tissue diagnosis of gastric SMTs. EUS-FNA has a slightly higher success rate in obtaining tissue diagnosis than KHB.
2) Both methods enable immunohistochemical evaluation of GIST.
3) KHB allows better to determine MA in GIST than EUS-FNA. But none of them is able to acquire enough sample which can safely determine prognostic mitotic activity.
4) GIST are the most common gastric SMTs.