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INTER- AND INTRA-OBSERVER RELIABILITY IN DETECTING GASTRIC INTESTINAL METAPLASIA BY MEANS OF NARROW BAND IMAGING WITH MAGNIFYING ENDOSCOPY

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Background and aim: Narrow Band Imaging with Magnifying Endoscopy (NBI-ME) has been recently shown to be able to accurately detect gastric intestinal metaplasia (GIM) through the visualization of a light blue crest (LBC) on the epithelial surface. However, limited data are available on the reliability of this technique among different observers. The aim of this study was to define the intra- and inter-observer agreement among different endoscopists in identifying GIM using NBI-ME.
Material and methods: We prospectively evaluated consecutive patients undergoing upper GI endoscopy (UGIE). Patients underwent UGIE with NBI-ME (GIF-Q160Z; 115x), performed by experienced endoscopists, and a five biopsy set (2 antrum+1 angulus+2 corpus), examined by two pathologists unaware of endoscopic findings, to assess the presence or not of GIM. In all endoscopic examinations at least three photographs were taken and recorded. The best quality image for each patient was highlighted. A total of 51 pictures were selected and anonymized. Thereafter, four endoscopists blinded to the histological diagnosis and to the results of the other observers, were asked to independently assess the pictures before and after a short training program (visualization of 160 images). A fifth more experienced endoscopist repeated his assessment at weekly intervals, totalizing four consecutive assessments of the same images shown in different orders. The patient was defined as GIM-positive if LBC was seen in any of the image fields. The correlation between LBC appearance and histology was measured.
Results: Comparing to the histological assessment, the NBI-ME observation had an accuracy of 91% (95% CI, 88–95%), a positive predictive value of 83% (95% CI, 74–94%) and a negative predictive value of 96% (95% CI, 92–99%) in detecting GIM. A very good intra-observer agreement was found (k=0.85). The agreement among observers and among observers and histology was moderate (k=0.58 and 0.55, respectively) after the first observation, but it improved significantly after a short training program (k=0.76 and 0.80, respectively).
Conclusions: Intra-observer agreement in detecting GIM using NBI-ME was very good, while the inter-observer agreement without adequate training was moderate. However, a very short imaging training permitted to obtain a good level of concordance among different endoscopists.

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THE DIAGNOSTIC VALUE OF NARROW-BAND IMAGING WITH MAGNIFYING ENDOSCOPY IN THE DETECTION OF GASTRIC INTESTINAL METAPLASIA: A PROSPECTIVE STUDY IN AN UNSELECTED POPULATION

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Background and aim: Narrow-band imaging with magnifying endoscopy (NBI-ME) is a novel technique that, through the visualization of a light blue crest (LBC) on the epithelial surface, is able to detect with accuracy presence of gastric intestinal metaplasia (GIM) in patients with previously diagnosed premalignant gastric lesions. However, data on the added diagnostic value of NBI-ME in patients without history of GIM is lacking. To define the predictive value of NBI-ME for identifying GIM in unselected patients.
Material and methods: We prospectively evaluated consecutive patients undergoing upper GI endoscopy (UGIE). Patients underwent UGIE with NBI-ME (GIF-Q160Z; 115x), performed by experienced endoscopists blinded to the conditions and medical history of patients, and a five biopsy set (2 antrum+1 angulus+2 corpus), examined by two pathologists unaware of endoscopic findings, to assess the presence or not of GIM. The correlation between LBC appearance and histology was measured. Semiquantitative evaluation of LBC appearance was also correlated with IM percentage at histology.
Results: We enrolled 100 (58F/42M, mean age 67±12) patients referring for GERD and/or dyspeptic symptoms (46%), cancer screening, anemia, positive fecal occult blood test (34%), chronic liver disease (9%), suspected celiac disease (6%) and other indications (5%). Prevalence of H. pylori infection on biopsies was 31%, while 67% patients were PPI users and 16% smokers. The appearance of LBC correlated with histological GIM with sensitivity of 80% (95% CI, 67–92%), specificity of 96% (95% CI, 93–99%), positive predictive value of 84% (95% CI, 73–96%), negative predictive value of 95% (95% CI, 92–98%), accuracy of 93% (95% CI, 90–97%). The NBI-ME examination overlooked GIM in 8 cases, in 7 of which it was less than 5%. Among the 6 false positive cases, histology examination showed a reactive gastropathy in 4 and H. Pylori chronic gastritis in 2 cases. The correlation between the grades of LBC appearance and the percentage of GIM was 79%.
Conclusions: NBI-ME has proved to achieve good sensitivity and specificity in recognizing GIM in an unselected population. Therefore, its clinical application may be useful in selecting and targeting patients to biopsy in order to identify those at risk of developing gastric cancer.

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DEFENSIVE MEDICINE PRACTICES AMONG GASTROENTEROLOGISTS IN LOMBARDY: BETWEEN LAWSUITS AND ECONOMIC CRISIS

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Background and aim: Defensive medicine is becoming a frequent behaviour among physicians, reflecting the worldwide increase in the number of medical lawsuits. This problem impacts on the economic "health" of most National Healthcare Systems and represents a stressful condition in daily medical practice.
As relevant data are still scattered, the present study aimed to clarify the impact of defensive medicine on the gastroenterological practice in Lombardy, which is Italy's largest and richest region, located in the north of the Country.
Material and methods: To date there are 170 gastroenterologists in Lombardy: 107 of them (63%) attending the Lombardy Annual Gastroenterological Conference of the Italian Federation of Gastroenterological Societies (FISMAD), received a questionnaire based on multiple choice tests and VAS scales. The questionnaire comprised of three parts evaluating: the respondent's characteristics, the amount of procedures prescribed and the rate of those performed with a defensive purpose.
Results: Sixty-four of 107 participants (60%) completed the questionnaire. Overall 94% of the respondents reported practising some defensive medicine. The percentage of defensive procedures usually requested by each respondent amounted to: 7.1% of all the colonoscopies prescribed, 7.1% of all the upper gastrointestinal tract endoscopies, 8.9% of the abdominal US scans, 4.9% of the abdominal CT or MR scans and 12.2% of all the consultations. The total number of defensive procedures prescribed per month by the participants was 878, while the 31.7% of the performed procedures (n = 4897.7) was reported as defensive-medicine based. According to the 2012 regional reimbursement fees, the yearly cost of the defensive procedures prescribed and/or performed by all gastroenterologists in Lombardy was estimated of 8,617,511 Euro.

Conclusions: Present data indicate that defensive medicine deeply affects current medical practices among gastroenterologists, and causes a relevant economic impact on the clinical practice.

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APPROPRIATE INDICATIONS OF GASTROINTESTINAL ENDOSCOPY: A PROSPECTIVE STUDY USING ASGE GUIDELINES

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Background and aim: GI endoscopy is generally indicated when a change in therapeutic management is probable based on the results of endoscopy, when a therapeutic procedure is contemplated. Endoscopic treatment is contraindicated when the risks to patient health are proven to outweigh the potential benefits of the procedure or when an adequate patient cooperation cannot be obtained. The aim of our study was to evaluate, in accordance to valid guidelines, the percentage of appropriate EGD and colonoscopy requests made either for in-or out-patients. If the absolute number or percentage of appropriateness is lower than the regional standard (80%), it should be our objective, in direct collaboration with primary care physicians and our hospital colleagues, to reach guidelines standards as quickly as possible.
Material and methods: Our study is a prospective, multicenter study (5 different endoscopic units) conducted to analyze the following data of EGD and colonoscopy: endoscopic indications, data of endoscopic procedure, patient data, motivation of request, appropriateness according to the ASGE guidelines, appropriateness according to Italian guidelines (AIGO-SIED-SIGE), motivation of the endoscopist with medical history and diagnostic findings.
Results: We analyzed 748 endoscopic requests made by primary care physicians (EGD 412; colonoscopies: 336). In accordance to ASGE guidelines, 219 EGD (53.1%) and 205 colonoscopy requests (61%) could be classified as appropriate. Further we analyzed 519 endoscopic requests made by hospital colleagues for inpatients (206 EGDs and 313 colonoscopies). According to ASGE guidelines, 157 EGD (76.2%) and 260 colonoscopy requests (83%) could be classified as appropriate. EGD findings showed: 14 tumors, 2 esophageal ulcers, 9 gastric ulcers, 16 duodenal ulcers. Only one patient with duodenal ulcer had an inappropriate request for EGD. Colonoscopy findings showed 19 adenocarcinomas (all patients had an appropriate requests).
Conclusions: Our results confirmed a high rate of inappropriate procedures according to ASGE guidelines, requested by internists, surgeons and primary care doctors for both outpatients and inpatients. The proportion of not indicated endoscopic procedures must be reduced by a more careful application of the ASGE guidelines. The use of Guideline criteria improves patients selection for endoscopic examination and can contribute to enhancing the quality and efficiency of medical care.

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THE TREATMENT OF RECURRENT ZENKER'S DIVERTICULUM AFTER TRANSORAL OR SURGICAL MYOTOMY

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Background and aim: After its introduction in 1995, flexible endoscopic treatment of patients with Zenker diverticula has become a safe and effective option for the treatment of recurrence. The aim of our study is to assess the feasibility and outcome of incision of the residual septum between esophagus and diverticulum after previous non flexible endoscopic treatments, as rigid endoscopic diverticulostomy or open diverticulectomy with myotomy of the upper esophageal sphincter.
Material and methods: From 2009, after transoral stapling (10 patients, 91%) or cricopharingeal myotomy and diverticulopexy (1 patient, 9%), 11 patients underwent flexible endoscopic treatment at our Institution. Median age was 77 years (62–86), 8 (72%) were males and 3 (28%) females.
All patients were evaluated for symptoms using a detailed questionnaire and they had preoperative barium radiography of the pharynx and esophagus.
Results: Patients experience recurrence of symptoms at a median time of 25 months (4–131). Median preoperative symptoms score was 9 (0–22), according to dysphagia and regurgitation severity and frequency. The median size of the pouch, measured at barium swallow, was 18 mm (10–50 mm).
All patients underwent flexible endoscopy with division of the residual septum with a median of 1.8 sessions (1–3). In particular, four patients required 3 sessions, one patient two sessions and 6 patients needed only a session. A microperforation occurred in only a patient (9%), conservatively treated, there were not other complications.
The median follow-up was 46 months (7–102). After our treatment, in 10 patients (91%) symptoms disappeared or improved significantly, while one patient (9%) had a poor result, and for him another session of treatment has been planned. The median postoperative symptoms score was 0 (0–13).
Conclusions: Flexible endoscopy is safe and effective in the treatment of recurrences of Zenker's diverticula. It offers a long-term improvement of dysphagia without complications.

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PERCUTANEOUS ENDOSCOPIC GASTROJEJUNOSTOMY (PEGJ) FOR CONTINUOUS LEVODOPA DELIVERY FOR THE TREATMENT OF COMPLICATED PARKINSON'S DISEASE: A SIX YEARS EXPERIENCE

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Background and aim: A jejunal extension tube introduced through a PEG can be used for drug delivery directly in the small intestine. Continuous small intestine levodopa infusion (CLI) through a PEG and an extension jejunal tube (PEGJ) is an effective treatment for complicated Parkinson's disease (PD). Aim of this retrospective study is to analyze features and outcome of PD patients (pts) with PEGJ placed for CLI.
Material and methods: Between 2006 and 2012, 43 pts (27 m, 16 w; mean age 64 years, mean duration PD = 13 years) with advanced PD were submitted for PEGJ placement. After PEGJ placement the devices were endoscopically replaced on demand (tube deterioration, migration or complications) or after 1±0.5 years from positioning.
Results: PEGJ was correctly positioned in 41 PD pts (95.3%). In 2 pts it was not due to failure in identifying a correct point of incision. Infection at the puncture site occurred in 1 (2.4%) patient. During a mean follow-up of 763 days (range 83–2093) 89 other endoscopic procedures were performed: 45 PEGJ routine replacements (373±103 days after previous PEGJ positioning or replacement), 26 PEGJ replacements due to deterioration or knots (102±69), 5 J-tube replacement for proximal migration (105±103), 5 PEGJ replacement for complications (172±209), 8 PEGJ removal for different treatments (after 773±623 days from start of CLI). Complications included 2 burried bumper syndrome, 2 distal J-tube migration due to a bezoar causing gastric and duodenal pressure ulcers for the tension of the J-tube, 1 infection at PEG site. Complications or malfunction of the tubes concerned 15 pts, from 1 to 4 times. In 21 pts there was no complication after a mean follow-up of 847 days. None of the patients interrupted the treatment because of tubes-related complications or malfunction. During follow up time, duration of motor complications time shortened significantly in all patients ($p<0.01$) with a significant improvement in activities of daily living scales ($p<0.02$).
Conclusions: PEGJ for CLI is a safe and effective procedure for complicated PD. Major complications occurred in 5 (3.8%) of the 130 endoscopic procedures or in 4 (11.1%) of the 36 patients with adequate follow-up. An accurate monitoring of minor complications onset is needed. Further studies have to better identify patients more likely to develop complications.