

patient) and noncompliance (6 patients). Nineteen patients were administered a 7-day triple treatment: 11 with LR supplementation during and 8 after therapy. Sixtyfour patients were administered sequential regimen: 32 with LR supplementation during and 32 after therapy. At the end of the study, the eradication rate was significantly higher in the sequential group compared with the 7-day triple (88% vs 63%; $p=0.01$). In our population, the whole eradication rate with the LR supplementation was 82% versus 74–76% reported in literature without probiotics.

Conclusions: The results of our study confirmed that as the first-line, the sequential therapy seems more efficiency than standard 7-day, in the H.pylori eradication. The LR supplementation appears improve the H.pylori eradication rate, although large, double-blind, controlled studies are needed to confirm these results.

P.19.17

PROSPECTIVE LONG-TERM STUDY OF THE CLINICAL EFFICACY OF FLEXIBLE ENDOSCOPIC DIVERTICULOSCOPE-ASSISTED ZENKER DIVERTICULOTOMY AND PROGNOSTIC VARIABLES

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Background and aim: Approaches to myotomy of Zenker diverticulum (ZD) are rigid endostapling and surgery. Flexible endoscopic diverticulotomy is less invasive but lacks of technique standardization and clinical data. To prospectively assess the long-term clinical efficacy of flexible endoscopic diverticuloscope-assisted myotomy of ZD.

Material and methods: From 3/2005 to 3/2009, 35 pts with ZD (19 F; age 69 yrs; depth 3 cm) underwent divertic.-assisted myotomy and were followed-up up to 10/2010 (43 mos \pm 15). Endotherapy consisted in stabilization of the septum between the ZD and esophagus by a diverticuloscope, cut of the septum by needle-knife in a single session [1]. Symptoms were differentiated in dysphagia, regurgitation, respiratory, nocturnal. Severity was scored according to frequency (days/week): 0 = none; 1 = 2; 2 = 3-4; 3 = 5-7. Follow-up was scheduled after 1 and every 6 mos. Success was defined: for all symptoms as complete (\leq 2 symptoms of grade 1), and for dysphagia only (\leq grade 1). Variables for prognosis and Kaplan-Meier curves for complete success were: age, sex, ZD depth, residual pouch.

Results: Endotherapy was completed within 13 min (range 3-20); perforation occurred in 1 (3%). Depth of ZD was significantly correlated to residual pouch ($P<0.0001$). Complete and dysphagia success rates were 86% and 97%, respectively, at 1 month but significantly decreased at the end of follow-up (49% - 77%, respectively, $P<0.01$). Kaplan-Meier curves showed a significantly higher complete success if residual pouch was \leq 10 mm ($P=0.035$). At the end of follow-up, prevalence of grades 2&3 and severity of all symptoms were significantly lower ($P<0.01$): dysphagia (91% vs. 34%), regurgitation (89% vs. 26%), respiratory (97% vs. 9%), nocturnal (94% vs. 9%). Ab ingestis pneumonia did not occur after treatment (20% vs. 0%; $P=0.01$).

Conclusions: Flexible endoscopic divertic.-assisted myotomy for ZD leads to a resolution or improvement of single symptoms in $>2/3$ of cases and abolishes ab ingestis pneumonia. Actually, complete clinical success is achieved in 50% when a strict definition is applied. A significant better clinical outcome is related to the deeper section of the septum.

Reference:

[1] Costamagna G et al. Endoscopy 2007.

P.19.18

FUNDIC GLAND POLYPS IN FAP PATIENTS: THE ROLE OF FICE IN DYSPLASIA EVALUATION

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Background and aim: Fundic gland polyps (FGPs) are common in familial adenomatous polyposis (FAP) but are considered benign lesions. Recent cases of gastric carcinoma arising from FGPs, presumably from a dysplasia–carcinoma pathway, have been reported in FAP patients. Identifying a dysplastic FGP is currently obtained by random biopsies, which are not oriented and with a high rate of missing lesions. Fujinon Intelligent Colour Enhancement (FICE) is an endoscopic tool able to enhance the pit and vascular pattern for characterization of the gastrointestinal mucosa and the prediction of histopathology. Actually, no studies are conducted with FICE in evaluation of FGPs in FAP patients.

Aim of this study was to evaluate in these subjects the role of FICE in identifying dysplasia and adenomatous foci in FGPs in comparison of white light endoscopy (WLE).

Material and methods: Demographic and endoscopic information were obtained from 22 consecutive subjects undergoing upper endoscopic surveillance for FAP from March 2011 to September 2011. Each exam was conducted by two endoscopists and divided into two phases, on WLE and on FICE mode without magnification respectively. Biopsies were obtained from FGPs suspected for dysplasia or adenomatous tissue according to size, number and Kudo classification, after a rendez-vous between the two operators. Histological results were than compared with FICE and WLE appearance.

Results: 18/22 patients had fundic polyposis (81.8%). During WLE, 116 polyps were resected. They were all FGPs, except 1 hyperplastic and 2 inflammatory polyps, all of them without dysplasia. During FICE visualization, 3 polyps appeared suspected for harboring adenomatous foci but not dysplasia (Kudo III). All of them were FGPs without adenomatous tissue nor dysplasia (positive predictive value, PPV, 0%). All polyps were subcentimetric.

Conclusions: In contrast to other studies, we didn't identify any case of dysplasia or adenomatous tissue, neither in the WL group nor in the FICE one. We can't understand if FICE is able to identify more dysplastic areas in FAP FGPs than WLE because no polyp had features of dysplasia. However FICE gave a PPV of 0% in the search for adenomatous foci. Maybe the use of magnification and a longer time between the endoscopies could define the role of FICE in the surveillance of FGPs in FAP patients.

P.19.19

DISTRIBUTION OF ESOPHAGEAL DYSMOTILITIES AMONG PATIENTS WITH NON-CARDIAC CHEST PAIN, DYSPHAGIA OR BOTH

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Background and aim: Esophageal diseases are the main cause of dysphagia (D) and non cardiac chest pain (NCCP). The most frequent alteration in patients with NCCP are nutcracker esophagus (NE) and nonspecific motility disorders (NEMD); among patients with D, are achalasia and diffuse esophageal spasm (DES).

Our aim is evaluate the distribution of esophageal and of lower esophageal sphincter (LES) motor abnormalities in patients with D, NCCP, or both.

Material and methods: This is a retrospective analysis of data on 716 patients with NCCP and/or D collected between 1994 and 2010 at the University of Palermo Hospital. We did three groups of patients: 1st with D (615 patients 86%), 607 patients underwent manometry, 147 underwent 24h-pHm and 26 underwent 24h bilimetry; 2nd with NCCP (85 patients 12%), 84 patients underwent manometry, 73 24h-pHm and 16 24h bilimetry; 3rd group with NCCP+D (16 patients 2%), all patients underwent manometry, 5 underwent 24h-pHm and 2 underwent 24h bilimetry

Results: Manometric anomalies were found in 84% of cases ($p < 0.001$).

In the 1st group the most common disorder was achalasia (41%), in the 2nd was NEMD (26%), in the 3rd was hypertensive dyskinesia (37%) ($p < 0.001$). LES was normal in 46% of patients ($p < 0.001$). In the 1st group the most common LES alteration was hypertensive LES (50%), in the 2nd and in the 3rd 80% and 69% respectively of patients showed no LES alterations ($p < 0.001$). 83% of patients showed normal upper esophageal sphincter (UES) ($p = 0.005$). In all groups 81%, 99% and 94% of patients respectively showed no UES alterations ($p = 0.005$). In the 1st and in the 2nd group most of patients showed no acid, biliary or mixed reflux (1st group: 65%; 65% and 85% respectively) ($p = 0.4$), (2nd group: 56%; 81% and 81% respectively) ($p = 0.06$). In the 3rd group acid reflux was present in 60% of patients, biliary reflux in 100% of patients, no patients showed mixed reflux ($p = 0.8$), see Table 1.

Table 1. Demographic and clinical characteristics of patients according to esophageal symptoms

	Dysphagia (n=615)	Chest pain (n=85)	Mixed (n=16)	p
Age (years)	55.4 ± 17.4	49.4 ± 13.5	56.4 ± 12.7	0.009
Gender				
male	276 (44.9%)	44 (51.8%)	7 (43.8%)	0.4
female	339 (55.1%)	41 (48.2%)	9 (56.2%)	
Manometry*				
normal	79 (13.0%)	29 (34.5%)	2 (12.5%)	<0.001
hypertonic	65 (10.7%)	15 (17.9%)	6 (37.5%)	
hypotonic	89 (14.7%)	13 (15.5%)	0	
achalasia	249 (41.0%)	3 (3.6%)	3 (18.8%)	
DES	45 (7.4%)	2 (2.4%)	4 (25.0%)	
aspecific	80 (13.2%)	22 (26.2%)	1 (6.2%)	
Hiatal hernia*				
present	124 (20.4%)	31 (36.9%)	3 (18.8%)	0.003
absent	483 (79.6%)	53 (63.1%)	13 (81.2%)	
LES*				
normal	247 (40.7%)	67 (79.8%)	11 (68.8%)	<0.001
hypertonic	305 (50.2%)	4 (4.8%)	4 (25.0%)	
hypotonic	51 (8.4%)	11 (13.1%)	1 (6.2%)	
dyscynetic	4 (0.7%)	2 (2.4%)	0	
UES*				
normal	491 (80.9%)	83 (98.8%)	15 (93.8%)	0.005
hypertonic	3 (0.5%)	0	0	
hypotonic	8 (1.3%)	0	0	
dyscynetic	105 (17.3%)	1 (1.2%)	1 (6.2%)	
Acid reflux*				
present	52 (35.4%)	32 (43.8%)	2 (40.0%)	0.4
absent	95 (64.6%)	41 (56.2%)	3 (60.0%)	
Biliary reflux*				
present	9 (34.6%)	3 (18.8%)	2 (100%)	0.06
absent	17 (65.4%)	13 (81.3%)	0	
Mixed reflux				
present	4 (15.4%)	3 (18.8%)	0	0.8
absent	22 (84.6%)	13 (81.3%)	2 (100%)	

*Some data are missing.

Conclusions: Our data differs from those of other studies because they were collected from a single tertiary level referral center and analyzed by a single examiner. The high percentage of symptomatic patients with non pathologic esophageal functional pattern suggest that these patients need more detailed studies. We believe that these patient could suffer by pharyngo-esophageal motility alteration and should be investigated with videofluorography.

P.20.1

THE DIFFERING ROLE OF OVERWEIGHT AMONG THE VARIOUS SUBGROUPS OF NON-EROSIVE REFLUX DISEASE

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Background and aim: Many studies showed that the association between overweight and erosive esophagitis (EE) is very strong, while is less consistent with non-erosive reflux disease (NERD). We have hypothesized that this difference may be due to considering NERD patients as a unique population instead of the collection of various subgroups with different pathophysiological characteristics. To assess whether the pathogenetic influence of an

increased body weight may be different among the various subgroups which are generally incorporated under the umbrella term of NERD.

Material and methods: We studied 81 patients with EE, 48 controls and 295 NERD patients, who were subdivided by impedance-pH off-therapy as: 1) NERD pH-POS (abnormal oesophageal acid exposure time (AET)); 2) Hypersensitive Esophagus (HE, normal AET/SAP+); 3) Functional Heartburn (FH, normal AET/SAP-). Body mass index (BMI) was also calculated. EE and NERD patients underwent also a stationary esophageal manometry. Pressure of LES, presence of hiatal hernia and effectiveness of esophageal motility were measured according to international criteria.

Results: Mean BMI was significantly higher ($p < 0.05$) in EE than in endoscopy-negative patients as a whole and controls [27 (18-40) vs. 25 (16-48) vs. 23 (16-34)]. However, the separation of endoscopy-negative patients showed that mean BMI was higher ($p < 0.05$) in those with increased AET [26 (18-45)] than in HE [24 (16-48)]. The former subgroup was similar to EE, while the latter one to both FH [23 (16-34)] and HVs ($p = ns$). Increased BMI represented a risk factor for EE (odds ratio [OR] 1.4; 95% confidence interval [CI], 1.2-1.6) and NERD pH-POS subgroup (OR 1.35; 95%CI, 1.2-1.5). Moreover, similar to EE patients, NERD pH-POS patients had also significantly more esophageal motor abnormalities and higher prevalence of hiatal hernia ($p < 0.01$) than those with HE and FH.

Conclusions: Our study shows that overweight represents an important risk factor for EE and pH-POS NERD and not for Hypersensitive Oesophagus and Functional Heartburn, thus confirming the heterogeneity of the deceiving NERD concept. Finally, the increased prevalence of oesophageal motor abnormalities and hiatal hernia in NERD patients with increased esophageal acid exposure seem to corroborate the strength of the relationship between these patients and those with EE.

P.20.2

REPRODUCIBILITY OF MULTICHANNEL ELECTROGASTROGRAPHY PARAMETERS IN DYSPEPTIC PATIENTS AND HEALTHY CONTROLS

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Background and aim: A growing interest has arisen about electrogastrography (EGG) as a non invasive tool to assess gastric function. However, only few studies have attempted to assess reproducibility of this technique, with inconsistent results because of the different techniques and the small number of studied subjects. The aim of this study was to verify the reproducibility of multichannel cutaneous EGG in healthy and in dyspeptic subjects.

Material and methods: A total of 30 dyspeptic patients (12 M, age 21-40 years, BMI 22±5) and 10 age and sex matched healthy controls were enrolled. All subjects underwent two successive examinations involving a 30-min fasted 4-leads surface recording, followed by a 60-min postprandial registration after intake of a 480-kcal solid test meal. Parameters considered were dominant frequency, percentage of normal rhythm, the dominant frequency instability coefficient (DFIC) and power ratio. All measures refers only to lead positioned on the abdominal projection of gastric pace-maker. Data (mean ± SEM) were compared by using the paired t test, and individual variability was expressed as the percent coefficient of variation (CV%).

Results: In healthy subjects, the dominant frequency was highly reproducible ($p > 0.05$), with similar coefficient of variation during fasting and postprandial (8% and 15% respectively). Percentage of normal rhythm also showed a low variability ($p > 0.05$; CV of 20% and 11% in fasting and postprandial session respectively). DFIC and power ratio, conversely, showed a high degree of variability. Similarly, in patients, the dominant frequency was highly reproducible ($p > 0.05$), with CV of 5% both in fasting and postprandial period and percentage of normal rhythm was also quite reproducible, with CV of 19% and 21% in fasting and postprandial phase respectively. DFIC and power ratio showed a higher degree of variability also in patients.

Conclusions: Both in dyspeptic patients and in healthy control subjects, gastric myoelectrical activity, quantified by multichannel electrogastrography, shows good reproducibility during both fasting and postprandial state. The