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Abstract Issue

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CONCLUSION: The recognised differentials by sex and social group are seen. However once engaged in screening the vast majority of individuals in all social groups continue participating. Thus, there are implications for encouraging uptake and targeting funding and resources to traditionally disengaged groups. However, improving screening uptake in disadvantaged groups increases the proportion of false positive investigations.

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Disclosure of Interest: None Declared

Keywords: Colorectal cancer, Screening

P426 THE EFFECT OF A MULTISPECIES PROBIOTIC ON THE INTESTINAL MICROBIOTA DURING ANTIBIOTIC THERAPY

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INTRODUCTION: Antibiotic intake causes a marked and sustained disturbance of the intestinal microbiota resulting in long-term health consequences. Probiotics have shown to be able to prevent these disturbances. However, different probiotics (both mono- and multispecies) and treatment strategies (during or after antibiotic therapy (ABT)) are used. The aim of this study was to investigate the efficacy and safety of a multispecies probiotic "Rioflora®Balance" during and directly after ABT.

AIMS&METHODS: Patients treated with ABT for focal pneumonia were randomized into three groups. Group 1 received 2 capsules Rioflora®Balance twice daily (10^{10}cfu/day) for 14 days in parallel with ABT; group 2 received 2 capsules Rioflora®Balance twice daily (10^{10}cfu/day) for 14 days directly after cessation of ABT; group 3 received ABT only. At the start and end of ABT/multispecies probiotic supplementation complaints were assed by the treating physician. Moreover, gas chromatography was applied to investigate the dynamics of the small intestinal microbiota and quantitative PCR was used to determine changes in the colonic microbiota (*Bacteriodes fragilis, Bacteriodes thetaiataomicron,* lactobacilli, bifidobacteria, *Clostridium difficile, Eschericia coli* and *Faecalibacterium prausnizii*).

RESULTS: 120 patients completed the study (40 in each group, mean age 33.7±9.4 years; 47 men, 73 women). ABT had a profound influence on the small and large microbiota (increase in small intestinal *C. difficile* and Candida, decrease in both small intestinal and colonic bifidobacteria and lactobacilli, decrease in small intestinal *B. fragilis* and an increase in colonic *E.coli*). Multispecies probiotic supplementation was able to completely counteract these antibiotic induced disturbances of the microbiota. Moreover, an increase of both small intestinal and colonic bifidobacteria and lactobacilli was observed. Supplementation of the multispecies probiotic in parallel with ABT was characterized by a more pronounced effect than supplementation after cessation of ABT. No adverse events were reported. No antibiotic associated diarrhea was observed in any of the patients.

CONCLUSION: The intestinal microbiota was markedly affected by ABT. Although the exact long-term consequences of this disturbance need to be fully elucidated it is strongly associated with a negative impact on health. Supplementation with the multispecies probiotic Rioflora®Balance is safe and effective in preventing antibiotic induced disturbances of the intestinal microbiota. Moreover, multispecies probiotic supplementation appears to be more effective if started at the start of ABT than after cessation.

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Disclosure of Interest: None Declared

Keywords: antibacterial therapy, intestinal microbiota, multispecies probiotics

MONDAY, OCTOBER 14, 2013 9:00–17:00

OESOPHAGEAL, GASTRIC AND DUODENAL DISORDERS I – Poster Area

P427 PREVALENCE OF SEVERE ATROPHIC BODY GASTRITIS IN DYSPEPTIC PATIENTS SEEN AT THE ENDOSCOPY UNIT OF A BRAZILIAN GENERAL HOSPITAL

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INTRODUCTION: For many dyspeptic patients the diagnosis of atrophic body gastritis (ABG) is the first step indicating the presence of autoimmune gastritis, associated or not with pernicious anemia.

AIMS&METHODS: The aim of this study was to investigate the prevalence of cases of severe ABG among dyspeptic patients undergoing endoscopy in a Brazilian general hospital. We surveyed all cases of upper gastrointestinal endoscopy with biopsy sampling of gastric antropyloric region and gastric body performed from 2007 to 2009 at a general hospital in the city of Belo Horizonte. A total of 6,005 consecutive gastroesophageal endoscopies with gastric biopsies of the antropyloric and body mucosa were reviewed. Among these cases 2,564 (42.7%) had the diagnosis of chronic gastritis as the main pathological condition of the gastric mucosa. Among them, all the cases of gastritis reporting glandular atrophy or intestinal metaplasia were reassessed by an expert GI pathologist (AJAB). When necessary the paraffin blocks of these patients were retrieved for obtaining new histological sections. Immunohistochemical staining of ghrelin-producing cells was used to differentiate atrophic body mucosa with pseudopyloric metaplasia from true antropyloric mucosa. Ghrelin-producing cells are usually numerous in pseudopyloric metaplasia of the corpus and rare in mucous glands of the antropyloric region [1, 2].

RESULTS: Among the 2,564 cases of chronic gastritis 141 (5.5%) patients had the diagnosis of severe atrophic body gastritis in the original reports. After reviewing all the cases other 55 patients were added, making up 196 (7.6%) patients with severe ABG. The 196 patients ranged in age from 11 to 94 years, with a significant predominance of females (76.0%) over males (24.0%). Fifty patients were in relatively young age range (31 to 50 years) with an even more significant predominance of females, i. e., 83.3% *vs.* 16.7%.

CONCLUSION: The present results show that severe ABG seems to be a common pathological condition among Brazilian dyspeptic patients equivalent to 7.6% of patients with chronic gastritis seen at a general hospital. Furthermore, it appears that about 24% of these patients leave the hospital without receiving the correct diagnosis of gastric disease which may delay the final diagnosis of autoimmune gastritis.

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Disclosure of Interest: None Declared

Keywords: Atrophic body gastritis, Prevalence of atrophic body gastritis in Brazil, Severe atrophic body gastritis, Type A gastritis

P428 REGULATION OF OESOPHAGEAL KERATINOCYTE PROGENITOR CELLS FUNCTION BY THE COX2/ PROSTAGLANDIN E/C-AMP/PKA PATHWAY AND BY KGF. IMPLICATIONS FOR OESOPHAGEAL EPITHELIAL RENEWAL, HEALING AND THE THERAPEUTIC ACTIONS OF HYDROTALCITE

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INTRODUCTION: Oesophageal progenitor cells (OPC) are critical for maintenance, renewal and healing of oesophageal epithelium. The mechanisms regulating OPC function, survival and proliferation remain unknown.

AIMS&METHODS: We tested hypotheses that: 1) Prostaglandin E (PGE) EP receptors, cycloogygenase2 (Cox2) and keratinocyte growth factor (KGF) receptors (KGFR) are expressed in OPC and regulate their survival and proliferation; 2) upregulation of Cox2 (generating PGE) and KGFR by hydrotalcite (HTL, a newest generation antacid) is the basis for protective and healing actions of this drug. METHODS: We used: 1) normal rat oesophageal tissues, 2) organ cultures of rat oesophageal explants, and 3) human oesophageal epithelial HET-1A cell line, which has many features of OPC. Organ cultures and HET-1A cells were treated with placebo or HTL (1-5 mg/ml) for 1-4 hrs; HET-1A cells were also treated with: 1 μg/ml misoprostol (PGE1 analog); 1 μg/ml 16,16 dmPGE2; 0.4 mM protein kinase A (PKA) inhibitor, Rp-cAMP; or 50 ng/ml KGF. *Studies*: 1) epithelial integrity with confocal microscopy; 2) expression of Cox2, EP1-4 receptors, KGF and KGFR using immunostaining and western blotting; 3) In HET-1A cells we quantified: **a)** expression of Cox2, EP receptors1-4, KGF and KGFR and **b)** [i]cAMP (using Biotrack EIA), cAMP response element-binding protein (CREB) and cell proliferation (BrdU assay) prior to and after treatment with PGEs or KGF.

RESULTS: In normal oesophagus, OPC expressed Cox2, EP receptor2 and KGFR; stromal cells expressed KGF. In oesophageal explants, HTL treatment increased Cox2 and KGFR expression in OPC by 69±5 and 72±6% (both $p < 0.01$ vs. placebo). In HET-1A cells, HTL increased Cox2 and KGFR expression by >50% (both $p < 0.01$). PGEs treatment increased in HET-1A cells: c-AMP by >163-fold, P-CREB and cell proliferation by ~64% (all $p < 0.01$). These effects were abolished by pretreatment with PKA inhibitor. KGF stimulated HET-1A cell proliferation by 68% ($p < 0.01$).

CONCLUSION:) This is the first demonstration that Cox2 and EP-2 receptor are expressed and co-localized in oesophageal OPC indicating that Cox2 generated PGEs play an autocrine regulatory role in OPC proliferation and survival via the c-AMP/CREB/PKA signalling pathway. 2) KGFR are expressed in OPC while KGF is expressed in stromal cells reflecting mesenchymal-OPC interactions. 3) HTL treatment significantly upregulates expression of Cox2 and KGFR in OPC. 4) These findings provide new mechanisms regulating OPC, oesophageal mucosal defense and new insight into the protective and healing actions of hydrotalcite.

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Disclosure of Interest: None Declared

Keywords: cAMP, cyclooxygenase2 (Cox2), KGF, oesophageal, progenitor cells, prostaglandins E

pH of refluxate than CVS antacid studies (Table). There were no statistically significant differences between the total number of reflux events or the proximal extent of reflux.

	Antacid	Gaviscon	*p*
% time pH <4.0 median (IQR)	11.2 (5.9 - 17.85)	0.8 (0 - 8.95)	0.002
Total number of reflux median (IQR)	21 (16 - 31.5)	19 (14 - 32.5)	0.705
Nadir pH mean +/- SD	1.44 +/- 0.52	2.07 +/- 1.14	0.049
% reaching 17cm from LES median (IQR)	0.19 (0.12 - 0.33)	0.08 (0.026 - 0.17)	0.222

CONCLUSION: Gaviscon Double Action was more effective than antacid alone in controlling postprandial acid reflux. However, the number of reflux events and the spatial distribution of reflux within the esophagus were similar. This suggests that Gaviscon's effectiveness was related to its co-localization with and neutralization of the post-prandial acid pocket rather than by creating a barrier (raft) that prevents reflux.

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Keywords: alginates, antacid, esophagus, GERD, pH monitoring, treatment

P1026 EFFECT OF PROTON PUMP INHIBITORS IN ASTHMATICS WITH GASTROESOPHAGEAL REFLUX DISEASE

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INTRODUCTION: Prevalence of Gastroesophageal Reflux Disease (GERD) among patients with asthma has varied, according to different studies, from 33% to 90%[1]. Treatment with Proton Pump Inhibitors (PPIs) seems to improve asthma symptoms in some patients with asthma and GERD[2].

AIMS&METHODS: The objectives of this study was to investigate the presence of esophagitis in patients with asthma and GERD and to assess the effect of PPIs on pulmonary function. 51 patients with asthma and typical esophageal GERD symptoms (heartburn and/or regurgitation), according to the Montreal Consensus for GERD definition[3], were enrolled. All patients were submitted to upper gastrointestinal endoscopy, so that the presence of esophagitis could be recorded (according to Los Angeles classification). Patients were classified in two groups, according to the presence or absence of reflux esophagitis. Peak Expiratory Flow Rate (PEFR) was measured and then all patients began treatment with a double dose of PPI (omeprazole 20mg bid) for three months. PEFR was measured again at the end of the 3-month period. Response to treatment was defined a priori as positive if PEFR increased at least by >20%[4].

RESULTS: 44 patients (mean age 46±12 years, 24 women, 20 men) were finally investigated. 19 out of 44 patients (43.18%) had endoscopic findings of reflux esophagitis (grade A: 10, grade B: 5, grade C: 3, grade D: 1) and the rest 25 patients (56.82%) did not have reflux esophagitis. Among the esophagitis group, 4 out of 19 patients (21.05%) responded positively at the end of the 3-month treatment with the PPIs (PEFR increase >20%). Among the non-esophagitis group, 5 out of 25 patients (20%), improved their PEFR>20%. The difference between the two groups regarding positive response to PPI treatment was non significant (NS).

CONCLUSION: PPI treatment may improve pulmonary function in some patients with asthma and typical esophageal GERD symptoms. The presence or absence of reflux esophagitis does not seem to influence this response.

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Disclosure of Interest: None Declared

Keywords: asthma, Reflux disease

P1027 COMPARISON OF COMBINED THERAPY OF PROTON POMP INHIBITOR AND ALGINATES AND A MONOTHERAPY OF PROTON POMP INHIBITOR IN TREATMENT OF PATIENTS WITH EROSIVE ESOPHAGITIS AFTER USAGE OF NON-STEROID ANTI-INFLAMMATORY DRUGS

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INTRODUCTION: The serious medical problem is an esophagus pathology after usage of non-steroid anti-inflammatory drugs (NSAID). It is known that usage of NSAID (including low doses of the aspirin) is a risk factor of developing of damages of the esophageal mucous.

AIMS&METHODS: The aim: to evaluate the efficacy of proton pomp inhibitors (PPI) and combined treatment of PPI and alginates ("Gaviskon-Forte") in the treatment of erosive esophagitis after receiving NSAIDs. 68 patients with erosive esophagitis were observed. All of these patients use NSAIDs at least 1 month and have heartburn. These patients were divided into 2 groups: the 1st group (n=30) received PPI (pantoprasol) 40 mg once a day and "Gaviskon-Forte" 10 ml after a meal 3 times a day and 10 ml before sleeping within 14 days, the 2nd group (n=38) - PPI (pantoprasol) in the dose of 40 mg once a day. All patients responded to daily questionnaire for consideration of complaints; esophagogastroscopy and pH monitoring before and after the treatment were carried out.

RESULTS: Combination of PPI and "Gaviskon-forte" noted more persistent symptom control (heartburn to the 7th day disappeared in 53.3% of patients, to the 14th day - in 90.0% ($p<0.05$ in comparison to 2nd group)) compared with an isolated application of PPI (heartburn to the 7th day disappeared in 42.1% of patients, to the 14th day - in 68.4%). More pronounced positive dynamics of the endoscopic picture was observed in the group of patients receiving combination therapy (on 14th day full healing of erosion was observed in 73.3% in the 1st group and the 60.5% in the 2nd group ($p<0.05$)). Combined treatment of PPI and "Gaviskon-forte" improved results of pH monitoring (24 hours) and significantly reduces the period percent with intragastral pH less 4 during a day (from 23.5% to 7%), total reflux number decreased from 161 to 52.2 within 24h ($p<0.05$ in comparison to 2nd group). In the group of patients receiving only PPI the period percent with intragastral pH less 4 during a day reduced from 21.7% to 10.1%, total reflux number decreased from 143 to 72.2 within 24h. For a treatment period the side effects and allergic reactions were not registered.

CONCLUSION: Combination of PPI and «Gaviskon-Forte» showed the higher clinical and endoscopic efficiency in the treatment of the erosive esophagitis after usage of NSAID compared with monotherapy PPI. Also combination of PPI and "Gaviskon-forte" quite safety to consume. So we can recommend this combination to use in such patients

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Disclosure of Interest: None Declared

Keywords: alginates, erosive esophagitis, non-steroid anti-inflammatory drugs, proton pomp inhibitor

P1028 IMPROVEMENT IN SYMPTOM RELIEF WITH PANTOPRAZOLE MAGNESIUM 40MG VERSUS ESOMEPRAZOLE 40MG IN PATIENTS WITH EROSIVE ESOPHAGITIS AFTER 8 WEEKS

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INTRODUCTION: The proton pump inhibitor (PPI), pantoprazole-Mg, has a prolonged elimination half-life, which may translate into extended inhibition of the proton pump with the potential for improved symptom relief.

AIMS&METHODS: Pantoprazole-Mg was compared with esomeprazole over 4 and 8 weeks for symptom relief in a multicentre (14 Brazilian sites), phase III, randomised, double-blind, controlled study in patients with erosive gastroesophageal reflux disease (GERD; Los Angeles grades A–D). Patients received pantoprazole-Mg (n=290) or esomeprazole (n=288), administered as 40 mg once daily for 8 weeks. GERD-related symptoms were assessed at baseline (BL) and after 4 and 8 weeks using ReQuest^{T}-GI, which includes acid-related complaints, upper abdominal/stomach complaints, lower abdomen/digestive tract complaints and nausea.

RESULTS: Symptom relief rates were significantly higher at Week 8 with pantoprazole-Mg (n=275) than with esomeprazole (n=264) (91.6% vs. 86.0%, p=0.0370). Significant improvements were seen in mean ReQuest^{T}-GI scores from BL to Weeks 4 and 8 (both $p<0.0001$), and from Week 4 to Week 8 (p=0.0206), in pantoprazole-Mg recipients. ReQuest^{T}-GI scores significantly improved from BL to Weeks 4 and 8 (both $p<0.0001$) with esomeprazole, but not from Week 4 to Week 8. A similar trend was seen for all individual ReQuest^{TM}-GI sub-scores (Table). This correlated with improvements in general well-being from BL to Weeks 4 and 8 for both pantoprazole-Mg (both $p<0.0001$) and esomeprazole (both $p<0.0001$), and improvements from Week 4 to Week 8 for pantoprazole-Mg (1.42 to 1.06) but not esomeprazole (1.42 to 1.36).

Table. Individual ReQuest^{TM}-GI dimension mean scores after 4 and 8 weeks' treatment (intent-to-treat efficacy population).

	Acid complaints			Upper abdominal/ stomach complaints			Upper abdominal/ stomach complaints			Nausea		
	BL	Wk 4	Wk 8	BL	Wk 4	Wk 8	BL	Wk 4	Wk 8	BL	Wk 4	Wk 8
Pantoprazole-Mg												
Frequency	2.24	0.54	0.36	2.30	0.75	0.50	1.30	0.69	0.44	1.03	0.39	0.27
Intensity	2.61	0.70	0.47	2.75	0.96	0.68	1.76	0.89	0.59	1.30	0.54	0.41
Esomeprazole												
Frequency	2.15	0.49	0.44	2.36	0.81	0.71	1.60	0.80	0.74	1.16	0.39	0.36
Intensity	2.53	0.59	0.56	2.74	0.96	0.90	1.96	0.96	0.88	1.54	0.58	0.62

$p<0.0001$ for Baseline (BL) to Week (Wk) 4 and Week 8 for all dimensions for both drugs.

CONCLUSION: CONCLUSION: Symptom relief with pantoprazole-Mg continued to improve from 4 to 8 weeks and was greater than that with esomeprazole at Week 8, suggesting an extended period of treatment effect.

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The mean PgI level was 33.1 in the initial sample and 32.2 in the follow -up sample, no statistical difference was revealed (p=0.61). The mean PgI/PgII was 2.0 and 2.2, respectively (p=0.06).
In the group of patients with moderate to severe corpus atrophy and/or intestinal metaplasia (according to histology; 11 patients altogether) the mean PgI was 19.4 initially and 16.8 at the control (p=0.28); mean PgI/II was 1.0 initially, and 0.99 at the control (p=0.85)
Altogether 11 patients had undergone *H.pylori* eradication therapy during the study period. In those having undergone eradication the mean PgI was 35.0 initially and 35.1 at the control (p=0.97); mean PgI/II was 2.1 and 2.7, respectively (p=0.11).
In the group of 45 men the mean PgI level was 33.1 in the initial sample and 32.7 in the follow - up sample (p=0.86); mean PgI/II was 1.9 initially, and 2.1 - in the follow -up sample (p=0.04).
CONCLUSION: Our data show that initially PgI or PgI/PgII levels are relatively stable and do not change substantially during a three year period neither in the entire patient sample nor in patients with *H.pylori* eradication therapy as well as in patients with moderate to severe corpus atrophy and/or intestinal metaplasia. Slight increase of PgI/II in men during a 3-year period was observed.
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Disclosure of Interest: None Declared
Keywords: dynamics, levels, pepsinogens

P1064 ALPHA1 ACID GLYCOPROTEIN BINDS TO PACLITAXEL AND SUBSTANTIALLY ALTERS ITS ANTICANCER EFFECTS WHICH COULD BE RESTORED BY ERYTHROMYCIN

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INTRODUCTION: Paclitaxel (PTX) is widely used for gastric cancer treatment, especially as low dose weekly administration. Intravenously administrated PTX elutes into ascites, which concentration is about 10 nM, and shows anticancer effects directly in peritoneal cavity. It is well known that according to cancer progression, the level of Alpha1 acid glycoprotein (AGP) in serum and ascites often increase.
AIMS&METHODS: The aim of the present study was to clarify whether AGP binds to PTX and alters its anticancer effects. For the establishment of experimental dosage, the concentration of AGP in serum and ascites of gastric cancer patients with peritoneal carcinomatosis (PC) was measured by radial immunodiffusion assay. The inhibitory effects of AGP to PTX *in vitro* were evaluated by MTT assay using gastric cancer cell line; OCUM-2MD3. We also examined the combined effects of erythromycin (EM) with AGP *in vitro* and *in vivo*.
RESULTS: The mean levels of AGP were 1.524 mg/ml in serum and 0.834 mg/ml in ascites. Addition of AGP disturbed cell growth inhibition of PTX on dose dependent manner (0.2 to 1.2 mg/ml). However, combination with EM restored anticancer effects of PTX. The elevated level of AGP was detected in ascites of mice PC model inoculated OCUM2MD3 and reached a plateau on Day 17. PTX (5mg/kg/iv) alone did not diminished PC remarkably when PTX was administrated Day 7 and 14, whereas co-administration of PTX and EM (5 mg/kg/D7-17) significantly reduced PC *in vivo* (p=0.011).
CONCLUSION: AGP is an important regulatory factor modulating the ability of intravenous PTX, and combined therapy with PTX and EM might be useful for treatment of PC in gastric cancer.
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Disclosure of Interest: None Declared
Keywords: alpha 1 acid glycoprotein, erythromycin, Gastric cancer, paclitaxel, peritoneal carcinomatosis

P1065 ENDOSONOGRAPHY-GUIDED FINE-NEEDLE ASPIRATION VERSUS KEY-HOLE BIOPSY IN DIAGNOSTICS OF GASTRIC SUBMUCOSAL TUMORS – A RANDOMIZED STUDY

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INTRODUCTION: Gastric submucosal tumors (g-SMTs) are tumors arising from subepithelial layers of the gastric wall, mostly from submucosa and muscular layer. They usually have an intact mucosa lining on the inner surface. Prognosis and treatment of g-SMTs depend on its correct diagnosis which consists in the cytohistological and immunohistochemical examination. A standard forceps biopsy of mucosa is usually not helpful due to their location. Therefore, biopsy techniques capable of reaching deeper layer of gastric wall are needed.
AIMS&METHODS: Compare the yield and success of Endosonography-Guided Fine-Needle Aspiration (EUS-FNA) and Key- Hole Biopsy (KHB) in cytohistological and immunohistochemical diagnostics of g-SMTs.
Patients with endoscopically detected g-SMTs with diameter ≥ 2cm were randomly allocated to undergo either EUS-FNA by 22G needle or KHB (consisting of forceps biopsy through mucosal incision by a needle knife), both with subsequent histological/cytological and imunohistochemical evaluation of the specimen. In case of failure of the initial method, the other method was performed (cross-over).
RESULTS: Up to now, a total of 24 subjects (37,5% men, mean age 65,7 years), twelve in each group, with g- SMTs were enrolled in the study .
Primary tissue diagnosis was obtained in 83,3% (10/12) of patients in each group. The final diagnosis was established by the initial sampling in 20 (80%) and in 3 patients after cross-over. In the whole study population the final tissue diagnosis was: GIST (n = 15, 62,5%), leiomyoma (n = 4, 16,7%), lipoma (n = 2, 8,3%), MALT lymphoma (n = 1, 4,16%), adenocarcinoma (n = 1, 4,16%). In one case (4,16%) no diagnosis was obtained. In the population with final diagnosis GIST, ten patients were in the EUS-FNA group. Of 15 patients with a diagnosis of GIST, some MA could be evaluated only in 5 patients (2 in the EUS-FNA group). A number of mitoses in the required 50 high power fields was approximately specified only in 3 patients . In the trial population, twelve patients (five in tke KHB group, ten with diagnosis GIST and two with diagnosis Leiomyoma) were operated. The post-operative tissue diagnosis corresponded in 4/5 (80%) patients in the KHB group and 7/7 (100%) in FNA group.
CONCLUSION: 1) According to our study Gastrointestinal Stromal Tumors are the most common Gastric Submucosal Tumors (in 62,5%).
2) Endosonography-Guided Fine-Needle Aspiration and Key-Hole biopsy enable diagnosis Gastrointestinal Stromal Tumors.
3) Neither Endosonography-guided Fine-Needle Aspiration nor Key-Hole Biposy is able to provide adequate tissue sample to determine prognostic mitotic activity.
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Disclosure of Interest: None Declared
Keywords: EUS-FNA, KHB

TUESDAY, OCTOBER 15, 2013 9:00–17:00

H. PYLORI II – Poster Area

P1066 CHANGES OF ESOPHAGUS IN PATIENTS INFECTED WITH CAGA(-) AND CAGA(+) STRAINS OF HELICOBACTER PYLORI

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INTRODUCTION: Data about association between *Helicobacter pylori* infection and gastro-esophageal reflux disease (GERD) are controversial. Some studies have shown that *H. pylori* may protect against GERD and *H. pylori* eradication may be a risk factor of development of inflammation and erosive changes in esophagus. But other studies did not confirm it.
AIMS&METHODS: Aim: To estimate changes of esophagus in patient infected with *cagA(+)* and *cagA(-)* strains of *H. pylori.*
Materials and methods: 41 persons infected with *H. pylori* were under supervision. For all the surveyed patients analysis of complains and esophagogastroduodenoscopy were performed to estimate clinical and endoscopic signs of changes in esophagus. Also for all patients a biopsy from a stomach antrum was performed for verification of *H. pylori* infection by means of rapid urease test and polymerase chain reaction (PCR) with detection of genes of *H. pylori* pathogenicity island: *ureC, cagA, cagC, cagE, cagH* (Research laboratory "Diagnostics"). The choice of the genes selected for the analysis was based on the fact that these genes encode for several cytotoxins - the most important pathogenecity factors of *H. pylori.* All the surveyed patients have been divided into two groups: Patients from the 1st group (12 patients) were infected with *cagA(-)* strains. Patients from the 2nd group (29 patients) were infected with *cagA(+).* Statistical estimation was performed in programs Excel and Statistica 6.0 for Windows XP.
RESULTS: heartburn was in 75% in patients from 1st group and 79.3% in 2nd group. Hyperemia of esophagus (distal esophagitis) was in 41.7% of patients in 1st group and in 24.1% of patients in 2nd group ($p<0.05$). Erosions of esophagus were no in 1st group patients and were in 3.4% of patients in 2nd group ($p<0.05$). At the analysis of features of *cag*-status of *H. pylori* in these groups of patients it has been revealed that in patients from 1st group a frequency of occurrence of other investigated genes of *cag*-group (except *cagA*) of *H. pylori* pathogenicity islands was significantly lower than in patients from 2nd group: *cagC* gene – 8.3% and 55% ($p<0.05$), *cagE* gene – 22.2% and 33.3%, *cagH* gene – 25% and 80% ($p<0.05$) correspondingly.
CONCLUSION: Changes of esophagus are common in patients infected with as highly and lower virulence strains of *H. pylori. CagA(+)* status is associated with erosive changes of esophagus. Heartburn without hyperemia or erosions of esophagus can be sign of functional dyspepsia or endoscopic negative GERD.
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Disclosure of Interest: None Declared
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