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En esta nueva sección de la revista se publicarán anualmente los trabajos seleccionados para su presentación en la DDW (Digestive Disease Week-USA)

INFLUENCE OF PRIMARY SCLEROSING CHOLANGITIS (PSC) ON ULCERATIVE COLITIS (UC) DISEASE ACTIVITY

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BACKGROUND: Since disease activity of UC in PSC (UC/PSC) has been described as symptomatically mild with prolonged remissions, a protective influence of PSC on UC activity has been investigated, but evidences supporting this statement are limited. Controversial results have been reported in only few papers and/or abstracts on relapse frequencies, colectomy rates, hospitalization, and treatment requirements (Perdigoto R et al. Gastroenterology 1991, Olsson R et al. Gastroenterology 1991, Greenbloom SL et al. Gastroenterology 1994, Loftus EV et al. Gut 2005, Broom U et al. Dis colon Rectum 1995, Moayyeri A et al. J Gastroenterol Hepatol 2005, Lundqvist K et al. Dis colon Rectum 1997). **AIM:** to assess whether the presence of PSC in patients with UC influence the need of colectomy and/or Immunosuppression (Colect/Imms) due to an aggressive or chronic continuous clinical course. **MATERIAL AND METHODS:** UC patients with extensive and left-sided colitis from a single Centre (Jan 1990-Sep 2003) protocolized to detect PSC. Thirty-nine UC/PSC patients were compared with 987 UC/only by Cox proportional hazard regression analysis searching differences on Colect/Imms requirement. A regression model including potential UC severity modifiers (independent variables: gender, UC extent, age at UC onset) and a 2nd model including also UC/PSC, UC/only were devised. Maximum likelihood test was used for comparison. Hazard ratios and 95% CI were calculated. **RESULTS:** Median age 35 [18-72] vs. 37 [15-84] yrs, Gender (M/F): 24/15 vs. 478/509, Extensive/left-sided: 36/3 vs 578/409, disease duration (mean±SD) 11.7±7.6 vs. 7.9±8.0 yrs respectively. Colect/Imms was needed in 35.9% of UC/PSC cases and 32% of UC/only. However, Colect/Imms was earlier in the UC/only group (median [IQ range]): 3.4 years [1.4-8] vs. 12 years [5-15]) suggesting a rapidly aggressive course. Adjusting by gender, extent, age at UC onset, a diagnosis of PSC was shown as a factor that significantly reduce by half the risk of Colect/Imms secondary to UC activity (HR 0.509, 95% CI 0.296-0.875, p=0.015). An almost 4-fold increased risk was found for extensive UC (HR 3.9, 95% CI 2.9-5.2 p<0.0001). Probabilities to undergo Colect/Imms at 2, 5, 10, 15 years of UC onset were: UC/PSC: 2.2%, 6.6%, 10.3%, 25.0% vs. UC/only: 10.5%, 20.2%, 29.7%, 40.2% respectively. Nine (23%) of UC/PSC presented ÅÖ2 mild flares. **CONCLUSION:** Our results support previous reports that UC/PSC patients have a less aggressive or a more insidious clinical course than UC/only. However, in the long-term follow-up at least one-quarter of PSC/UC patients may require colectomy or immunosuppressant therapies.

THE PANCREATITIS-INDUCED MEMBRANE PROTEIN VMP1 THAT TRIGGERS AUTOPHAGYINTERACTS WITH S100A10

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ABSTRACT BODY: The VMP1 gene was characterized by its early and strong expression during the acute phase of pancreatitis. VMP1 is necessary in autophagy and its expression induces the formation of autophagosomes. In order to analyze the function of VMP1 at a molecular level, the purpose of this work was to search for interacting proteins by the Two-Hybrid strategy. This in vivo system is based on putting in contact the protein of interest with each of the proteins that are expressed by a cell line. We amplified by PCR 4 fragments from the VMP1 hydrophilic domains and then subcloned them in the pSOS vector. Three independent Two-Hybrid experiments were performed with each of the VMP1 fragments using a HeLa cells library. The checked positive clones were amplified by PCR, purified and finally sequenced. Of the 94 positive clones that were obtained, 11 of them corresponded to interacting proteins: S100A10, EIF, EEF1G, FADD, HSPA5, AlphaL-1 Fucosidase, Ribosomal protein S10, Kinesin 2, TARBP2, LARP1 y USP9X. A bibliographic search was done for each of the interactors that were found and those related with the role of VMP1 were selected. We started studying the S100A10 protein because it's over expressed in pancreatic tumors and it's related with vesicular transport. By performing pull-down essays we could confirmed its interaction with VMP1. Besides this, it was analyzed by confocal microscopy the effect of the interaction between VMP1 and S100A10 on the formation of the autophagosome; the recruitment of the fusion fluorescent protein pRFP-LC3 was used as marker. We found that over expression of S100A10 reduced significantly the recruitment of LC3 induced by VMP1 over expression.

In conclusion we were able to find out a group of genes that potentially interact with VMP1 in vivo and we demonstrated that the interaction VMP1-S100A10 reduces the formation of autophagosomes.

AUTOPHAGY MEDIATED BY VMP1 EXPRESSION IS A SURVIVAL MECHANISM IN CAERULEIN-TREATED AR42J PANCREAS CELLS

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ABSTRACT BODY: Autophagy is a degradation process of cytoplasmic cellular constituents, which serves as a survival mechanism in starving cells and it is characterized by sequestration of bulk cytoplasm and organelles in double-membrane vesicles called autophagosomes. Autophagy has been linked to a variety of pathological processes including human and experimental acute pancreatitis. We have recently characterized the Vacuole Membrane Protein 1 (VMP1), which is highly activated in acute pancreatitis, as a new autophagy-related protein that localizes in the membrane of pancreatitis-induced vacuoles. We have also shown that VMP1 is a novel autophagy related membrane protein that triggers autophagosome formation in mammalian cells.

Our aim was to study the role of VMP1-induced autophagy in pancreas acinar cells.

AR42J cells were cultured in nutrient and grown factor-replete conditions and treated with increasing doses of caerulein (Cae) in a time course scheme. We found that Cae treatment induces VMP1 expression in AR42J cells by RT-PCR and Western Blot analysis.

We also found that Cae treatment induces autophagy; it was demonstrated by pRFP-LC3 recruitment and by Western Blot of endogenous LC3. Apart from that, using trypan blue and acridine orange strategies, it was shown that Cae treatment eventually leads to cell death. Finally, in order to know whether VMP1 expression is directly involved in Cae-induced autophagy, VMP1 expression was silenced using two different specific VMP1-siRNAs. As a result we found out that Cae treatment failed to induce autophagy in VMP1-silenced cells and the effect was rescued after transfecting cells with a VMP1-expression plasmid. Moreover, silencing VMP1 expression decreased significantly AR42J cells survival under Cae treatment. Our results indicate that VMP1 is involved in caerulein-induced autophagy and suggest that VMP1-mediated autophagy is a survival mechanism in AR42J pancreas cells.

GASTRIC ACID SUPPRESSION OF ORAL POWDER 20 mg OMEPRAZOLE. PILOT STUDY IN HEALTHY SUBJECTS

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Background: since Omeprazol is acid labile, it is rapidly degraded by gastric acid secretion. The combination of Omeprazol plus sodium bicarbonate and alginate acid could protect Omeprazol from acid degradation and enhance the speediness of action of the proton pump inhibitor. The rapid neutralization of gastric acid produced by sodium bicarbonate activates the proton pumps, rendering them more susceptible to Omeprazol action.

Aim: To assess, in healthy subjects, the acid suppression capacity and the speediness of action of an oral powder association (Omeprazol 20 mg plus sodium bicarbonate 1680 mg and alginate acid 250.08 mg) using 24 h pHmetry.

Subjects and Method: prospective, open study in 13 healthy subjects (9 women) aged 36.69 ± 8.9 years. Gastric 24 h pHmetry with glass electrode located at 10 cm from lower esophageal sphincter was similarly performed on two different occasions in the same group of healthy subjects (day 0 and day 6). During the first pHmetry 6 subjects received no medication, and 7 took the powder association 2 h before the end of the procedure. The second study was performed with the subjects taking the medication for the six previous days, including the study day. For data comparison non-parametric Wilcoxon test was performed.

Measurements: a) time with pH < 4, b) time to reach the maximum pH value, and c) peak pH after first drug administration.

Results: the comparison between first and second study shows a significant reduction in gastric acidity.

	Percentage time pH < 4	Hours
Day 0	72.02 ± 20.18	17.28 ± 4.8
Day 6	34.05 ± 20.50	8.17 ± 4.92
p < 0.01		

Maximum pH obtained after the first drug administration was 6.98 ± 1.66, and the time to reach the peak was 18.34 ± 9.84 minutes. No adverse events were observed.

Conclusion: The results of this study show that this oral powder combination induces significant, fast and intensive acid gastric suppression. This new formulation has a distinct pharmacokinetic and pharmacodynamic profile. Unlike delayed-release proton pump inhibitors, this product provides a rapid and sustained control of gastric acidity.

LOW DOSE ASPIRIN AFFECTS THE SMALL BOWEL MUCOSA. RESULTS OF A PILOT STUDY USING A MULTIDIMENSIONAL ASSESSMENT

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Background/Aim: Data indicating that low-dose aspirin could determine intestinal damage are controversial. Our aim in this prospective study was to determine if the small bowel may be damaged by low-dose aspirin (ASA) (100 mg) on a short-term basis.**Material and Methods:** Twenty healthy volunteers (13 female; mean age: 39 yr; range: 19-64) underwent a baseline videocapsule endoscopy (VCE) (Given M2Aplus video capsule system; Given Imaging Ltd, Yoqneam, Israel), fecal calprotectin determination (Calprest, Eurospital, Italy) and permeability tests (sucrose and lactulose/mannitol [lac/man] ratio, in order to evaluate gastric and small bowel permeability, respectively). After the baseline determinations, subjects ingested 100 mg of enteric-coated aspirin once a day (with esomeprazole 20 mg twice a day for gastroprotection) for a total of 14 days. At the end of the drug period, all investigations were repeated. Video capsule images were blindly assessed by an expert endoscopist who reported the results using an endoscopic scale. **Results:** Pre- and post-ASA VCE were assessed in 19 subjects detecting 10 cases (52.6%) with alterations not evidenced in baseline studies (6 cases had petechiae, 3 had erosions and one had a bleeding ulcer and erosions in jejunum). Post-ASA lac/man ratio was above the upper end of normality (>0.025) in 10/20 controls. The median baseline lac/man ratio (0.021; range: 0.011-0.045) increased after ASA administration (0.036; range 0.007–0.258) but this difference was not significant (p=0.097).The median baseline fecal calprotectin concentration (4.4 μ g/g; range 1.9–79.2) increased significantly following ASA administration (22.5 μ g/g; range 3.1–75.3 μ g/g; p<0.0005). Four of 9 subjects with abnormal findings at VCE had lac/man ratios above the cutoff. Median baseline sucrose urinary excretion (70.0 mg; range 11.8–151.3) increased significantly after ASA administration (107.0 mg; 22.9–411.3; p<0.02).**Conclusions:** The short-term administration of ASA at a low dose regimen is associated with the presence of macroscopic abnormalities in the small bowel mucosa seen by VCE, a high prevalence of abnormal intestinal permeability and evidence of inflammation as shown by calprotectin (ASA-induced enteropathy). Our study also suggests that the daily 100 mg ASA administration produces modifications in gastric permeability that seems not be completely protected by the use of enteric-coated aspirin and esomeprazole.**TIME-COURSE ASSESSMENT OF THE CELIAC DISEASE-SPECIFIC SEROLOGY AFTER INITIATION OF A GLUTEN-FREE DIET**

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Background: The celiac disease (CD)-related antibodies are the most specific and sensitive tools for suspicion and diagnosis of a clinical disorder. However, despite its systematic use, the utility in the follow-up of patients after the initiation of the gluten-free diet (GFD) has not been assessed adequately. **Aim:** To prospectively determine the time-course of the CD antibodies looking for the best assay(s) in order to monitor the response to the GFD. **Patients:** We enrolled 84 adult patients consecutively diagnosed with CD who had completed a one-year follow-up.**Methods:** Serum samples obtained at diagnosis and every three-month after initiation of a GFD were assayed for a battery of tests: 1- IgA antigliadin (AGA); 2- IgA anti-tissue transglutaminase (a-tTG); 3- IgA endomysial (EmA); 4- IgA and 5- IgG deamidated gliadin peptide antibodies (a-DGP); 6- dual detection of IgA+IgG isotypes of a-DGP (IgA+IgG a-DGP); 7- dual detection of IgA+IgG isotypes of both a-DGP and a-tTG (DGP/tTG); and 8- IgA antiactin antibodies (AAA). Biopsies from distal duodenum were obtained at the one-year visit in only 35 patients. Compliance with diet at the final visit was established by the combined assessment of the physician in charge and an interview by an experienced dietician.**Results:** At diagnosis, the highest sensitivities were for DGP+tTG (100%), IgA+IgG a-DGP (98%), IgA a-DGP (97%), IgA a-tTG (97%) and EmA (96%), and the lowest for IgA AGA (83%) and AAA (80%). Treatment with the GFD produced a highly significant decrease of mean concentrations for all assays at three-month (p<0.00001) with further significant improvement in subsequent determinations. Treatment also produced a slow but progressive decrease in the % of positive assays each trimester which was highly significant at one-year for IgG a-DGP (46%; p<0.0001), IgA a-DGP (54%; p<0.0001), a-tTG (60%; p<0.001) and IgA+IgG a-DGP (64%; p<0.001) but not for DGP/tTG (90%; pNS). The effect of diet on the prevalence of positive samples was significantly faster and more pronounced for AAA (40% and 28% at three- and 12-mo), IgA AGA assays (44% and 28%) and IgA EmA (58% and 28%). Compared with strictly adherent, partially compliant patients had a significantly higher concentrations of most antibodies (p<0.01 to p<0.00001) and a significant lower number of positive samples of AAA, IgA AGA and EmA (p<0.00001).**Conclusions:** Quantitative and qualitative measures of CD antibodies over the time-course of GFD show that most assays are good markers of the effect of treatment. However, our study suggests that AAA, EmA and the conventional IgA AGA are the best non-invasive way to show remission of the disorder induced by the GFD.**CD30 ANTIGEN EXPRESSION IS INVOLVED IN CELIAC DISEASE**Periolo N,¹ Guillén L,¹ Barboza M,¹ Niveloni SI,² Mauriño E,² Bai JC,² and Cheriñavsky AC¹

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Background/aims: CD30 antigen is expressed after activation of normal B and T lymphoid cells. Different T cell activating stimuli induce CD30 expression on CD45RO+ precursors. The putative role of CD30 in celiac disease (Cel) is poorly known. Our aims are to determine CD30 expression after nonspecific activation of peripheral blood lymphocytes (PBL) and to examine CD30 expression in duodenal T cells from biopsies ex vivo challenged with gliadin. **Materials/methods:** PBL from 10 healthy controls (Co) and 10 active adult Cel patients were incubated with 1 mg/ml of anti-CD3 for 5 days. Triple immunofluorescence (anti-CD45ROPE or -CD25PE, -CD3PerCP and -CD30 FITC) and flow cytometry analysis were performed at baseline and days 3 and 5 after incubation. CD30 antigen was immunohistochemically evaluated in paraffin sections of duodenal biopsies from 6 Cel patients and 6 Co. Triple immunofluorescence and flow cytometry analysis was performed on isolated intraepithelial and lamina propria lymphocytes (IEL and LPL). Biopsy specimens from 3 Co and 3 Cel were similarly evaluated after 3-hour incubation of biopsies with 100 mg/ml of crude gliadin. **Results:** Meanwhile CD30 is not expressed on resting PBL, a peak is shown after 3-day incubation with anti-CD3 (Cel vs Co p=ns). Compared with Co samples, CD30 expression persists increased by day 5 in Cel (1.2±1.0 vs.13.3±3.0, p<0.05). CD30 frequency is increased on CD45RO+ and CD25+ subsets (10.5±2.0% vs. 0.3±0.1%, p=0.0238 and 11.1±1.9% vs. 0.6±0.2%, p=0.0025, Cel vs Co, respectively). While a similar low frequency of CD30+ cells was found at baseline in isolated IEL from Cel and Co (p=ns), the expression was increased in Cel LPL (vs. Co: 12.4±5.1% and 7.9± 3.3%, p=0.0367). Incubation with gliadin up-regulates CD30 expression in a subpopulation of LPL from both, Co and Cel. **Conclusions:** Cel patients show a persistent expression of CD30 on a subset of memory, activated cells that might be capable of signal transduction and differential immunoregulatory activity in peripheral compartment. Similarly, the higher frequency of CD3+CD30+ LPLs observed points to the presence of a differential activated subset of duodenal T cells probably involved in CD pathogenesis within the intestinal mucosa. After challenging of biopsies with gliadin, CD30 triggering might provide costimulatory signals for activation/proliferation of LPLs in both patients and controls. However, a functionally differential response remains to be demonstrated.**CELIAC DISEASE SEROLOGY WITH VERY HIGH ACCURACY MAY OBTAIN DIAGNOSTIC INTENSIVE BIOPSY IN DIFFERENT CLINICAL SCENARIOS**

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Background: Current diagnostic criteria for celiac disease (CD) are based on specific serology and mandatory intestinal biopsy. However, no critical analysis has been performed considering their comparative value and whether one can replace the other in the context of the heterogeneity of the disorder.**Aim:** to establish the diagnostic performance of a series of single serologic tests and combinations thereof in order to determine an accurate non-invasive diagnosis of CD in the context of the populations with varied pretest probability.**Materials:** We prospectively enrolled 592 individuals grouped according to the pretest probability for CD in high risk (n=141) and low risk (n=451) for the disorder. All subjects underwent endoscopic biopsy from the distal duodenum and a complete panel of CD-related serologic tests. Diagnosis of CD was based on histological grounds (Marsh's II or greater).**Methods:** Blood samples obtained from all participants at the time of the endoscopic procedure were blinded tested for: 1- IgA anti-tissue transglutaminase (a-tTG); 2- IgA and 3- IgG deamidated gliadin peptide antibodies (a-DGP); 4- dual detection of IgA+IgG isotypes of a-DGP (IgA+IgG a-DGP); 5- dual detection of IgA+IgG isotypes of both a-DGP and a-tTG (DGP/tTG); and 6- IgA antiactin antibodies (AAA). Statistical performance was assessed for single assays and combinations of two tests and the best approach is reported. We used cut-off provided by manufacturers.**Results:** Based on histology, 60 and 14 patients were diagnosed with CD in the high (prevalence 42.5%) and low risk groups (prevalence 3.1%), respectively. In the high pretest probability group, the combination of the dual conjugate IgA+IgG a-DGP with IgA a-tTG had 95% sensitivity, 100% specificity and 100% positive predictive value (PPV) when both tests were positive. No subjects with concordantly negative results for both assays were found to have CD. In the low pretest probability group, two assay combinations provided the best approach: IgG a-DGP plus IgA a-tTG and the dual IgA+IgG a-DGP plus IgA a-tTG, reaching 78.6% sensitivity, 100% specificity, 100% PPV if both tests are positive and 99.5% and 99.3% of NPV if both were concordantly negative for each option, respectively.**Conclusions:** Our study suggests that appropriate use of CD serology may accurately identify the vast majority of CD patients and controls in different clinical scenarios. The serological approach described may impact the diagnostic algorithm of CD, obviating the need of duodenal biopsy in more than 98% of individuals. Appropriate choice of serologic assays can result in considerable cost saving and better acceptance by patients.

VERY HIGH RATE OF MISDIAGNOSIS OF CELIAC DISEASE IN PRACTICE

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Background: Diagnosis of celiac disease (CD) is based on intestinal biopsy showing the presence of enteropathy and a congruent positive specific serology. However, the performance of these tools in clinical practice remains unknown and potential pitfalls may result in diagnostic misinterpretation.

Aim: Our goal was to analyze the diagnostic performance of CD-related serology and the histological assessment of duodenal biopsies performed in practice.

Material and methods: From September 2003 to October 2006, 54 consecutive patients referred to our tertiary center for a second opinion were enrolled in this retrospective study if biopsy slides used for diagnosis by external pathologists were available as well as the CD-related serology performed at diagnosis in both, the general labs and our specialized lab. An expert pathologist performed reviewed the original slides blinded to the former diagnosis. We considered as diagnostic gold standard of CD the serology and the histology assessment (Marsh's type II or greater enteropathy) performed in our referral center. Response to a gluten-free diet was considered in cases where serology and histology did not agree. Cases where the expert pathologist was not able to arrive at a diagnosis were excluded. According to original reports, 43 patients (79.6%) had been categorized with CD and 11 (20.4%) as not having the disorder.

Results: According to the gold standard criteria, only 22 patients (40.7%) were diagnosed with CD and 32 (59.3%) had not CD. Overall, 24 patients (44.4%) had a divergent diagnosis (23 patients originally identified as CD and 1 diagnosed as non CD) (kappa statistic for the overall agreement: 0.19). Misdiagnosis was mainly produced by an over diagnosis of CD (53.5% vs. 9.1%; OR: 11.5, 95% CI 1.35-97.9; $p < 0.02$). Compared with the gold standard serology, 39 patients (72.2%) had congruent results in practice (Cohen's kappa: 0.45) On the other hand, compared with the gold standard histological review, 28 samples (51.8%) had congruent diagnoses by the external pathologists (Cohen's kappa: 0.14). Misinterpretation was mainly due to a wrong diagnosis of enteropathy in non CD cases (OR: 30.0; 95% CI 5.7-157.7; $p < 0.0000$)

Conclusions: Our study detected a high rate of serological and histopathological misdiagnosis of CD in clinical practice. This was mainly due to a histologic overdiagnosis of CD. Although the nature of consultations in our referral center suggests a potential overestimation of the true prevalence of the problem, pitfalls in clinical practice may have profound negative impact on patients.

PREVALENCE OF CELIAC DISEASE IN A COMMUNITY HOSPITAL HEALTH MAINTENANCE ORGANIZATION

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INTRODUCTION: Celiac disease (CD) is a gluten-sensitive enteropathy characterized by a chronic injury in the small bowel, caused by gluten intolerance in genetically predisposed individuals. CD's different forms of presentation resemble more a multisystem disorder than a primary gastrointestinal disease, frequently remaining underdiagnosed by primary care physicians.

OBJECTIVE: To determine the prevalence of CD diagnosis within a health maintenance organization (HMO) population composed, predominantly, of middle-class individuals who live in an urban area.

MATERIAL AND METHODOLOGY: A cross sectional analysis of the electronic medical record system (EMR) of our HMO population between 1999 and 2006 was carried out. All patients in our adult population with clinical problems related to CD were identified by primary care physicians or specialists. People tested for IgA anti-transglutaminase antibodies (TG-ab) during the period were analyzed as well. The criteria used to define the case was based on a diagnosis of CD in the EMR and/or a TG-ab value $> 15U$.

RESULTS: According to these criteria, out of a total enrollment of 128,626 individuals in the HMO, 276 patients with CD diagnosis were identified. The prevalence of CD was 0.21%. The mean age of this group of people was of 40.8 years, of which 76.8% were female. The age distribution of the CD population was as follows: 26% under 18 years old, 50% between 18 and 60, and 24% over 60.

DISCUSSION AND CONCLUSIONS: In a previous study made in one of the largest urban areas of Argentina (La Plata city) using TG-ab as a detection method in blood samples of premarital tests, the serologic prevalence of CD was 1 in 143 individuals. In our HMO, using secondary databases we found the frequency of CD diagnosis to be 1 in 470. The rate between the assumed serological prevalence of CD in this urban population and the clinical diagnosis carried out in our center was 3 to 1. Although this level of diagnosis is among the highest rates published, there would still be 2/3 of the patients left without diagnosis.

CD, thus, appears to be a widespread public health problem. An increased level of awareness and clinical suspicion is needed and physicians must learn how to recognize the various clinical presentations of CD.

PREVALENCE OF COLORECTAL PREMALIGNANT LESIONS DETECTED BY COLONOSCOPY IN DIFFERENT RISK GROUPS FOR COLORECTAL CANCER

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BACKGROUND: Colorectal cancer (CRC) is the second most frequent cancer and the second cause of mortality related to cancer in Argentina. The detection of premalignant lesions (PML) through colonoscopy has been demonstrated to be effective in the prevention of CRC. It is important to be aware of the prevalence of these lesions to estimate their impact on the prevention of CRC in our population. The aim of this study was to assess the prevalence of PML in asymptomatic subjects with different levels of risk of CRC. **METHODS:** A cross-sectional analysis was performed based on the colonoscopy records of asymptomatic subjects screened for CRC in a General Hospital of Buenos Aires City, Argentina, between July 2004 and March 2007. The prevalence of PML was assessed in 2 groups: 1) average risk and 2) first-degree relatives with CRC. Patients with incomplete colonoscopy, poor preparation or second-degree relatives with CRC were excluded. PML was defined as polyps or flat adenomas with low or high-grade dysplasia. Multivariate logistic analysis was performed to establish the association between individual characteristics and PML. **RESULTS:** Data from 1233 subjects was collected (female= 733, mean age= 67.6 years SD= ± 11.2). We found a global prevalence of 24.1% for PML and 1.1% for CRC. Average risk group (n=476; female=246; mean age=61.8 years SD= ± 9.06) showed a prevalence of 22.1% for PML (CI 95%=18.3-25.8), in which 19.2% had low-grade and 2.5% high-grade dysplasia. The prevalence of CRC was 1.05%. First-degree relatives group (n=757; female =487; mean age= 54.9 years SD= ± 11.53) showed a prevalence of 25.2% (CI 95%=22.1-28.3), in which 20% had low-grade and 4.8% high-grade dysplasia. The prevalence of CRC in this group was 1.2%. In the validation set a logistic regression model showed that family history of CRC was independently associated with increased risk of PML (odds ratio=1.54; CI 95%= 1.15-2.05; $P=0.004$). This difference was greater in younger subjects (table 1). Male sex was also independently associated with an increased risk of PML (odds ratio=1.50; IC 95%= 1.15-1.97; $P=0.003$). **CONCLUSION:** Approximately a quarter of this population presented at least one PML and a significantly increased risk in first-degree relatives with CRC and male sex was observed. These results may contribute to issue local guidelines for CRC prevention.

Table 1. Prevalence in different age groups

Age groups (years)	Average risk (%)	First degree relatives with CRC
40-49	5.55	22.8
50-59	17.2	23.6
60-69	27.7	35.3
70-80	25	25

SMALL DUCT PRIMARY SCLEROSING CHOLANGITIS: SIGNS OF PROGRESSION IN A PROSPECTIVE LONG TERM FOLLOW UP STUDY

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Background and aim: when the "small duct primary sclerosing cholangitis" (SPSC) was introduced it was suggested that this may be part of the spectrum of primary sclerosing cholangitis (PSC). However, there are little data published and the outcome of these patients (pts) is unknown. It is important to investigate how many progress to large duct disease, cirrhosis or cholangiocarcinoma (CC). In this study we attempted to contribute to the progression in this entity. **Methods:** in a prospective study from September 1988 to September 2007 in those pts with diagnosis of PSC according to the international criterion the following variables were determined: age, gender, symptomatic and asymptomatic forms, ulcerative colitis (UC) prevalence. As well as development of intra and/or extra hepatic biliary system changes, cirrhosis and CC. Were necessary for the evaluations in "results": 3 annual clinical evaluations with liver function tests (ALT-AST-AP, total bilirubin, albumin and prothrombine). Also initial liver biopsy and cholangiogram (ERCP or MRCP), annual ultrasonography and 24 mo follow up. Then the pts with SPSC were chosen based on the following criteria: 1.A liver biopsy consistent with PSC (evaluated by an liver pathologist), if possible a second biopsy was performed and Ludwig classification was used 2. A normal basal cholangiogram (C) and annual control since 1999. 3.Abnormal liver tests and 4.Exclusion of other chronic cholestasis. In both groups (SPSC and "classical" intra and extrahepatic PSC) the variables were measured. Statistical methods were χ^2 and Fischer test. **Results:** 54 pts presented PSC 18.5% (10/54) were SPSC (60% females, 20-69 years, mean 47, 60% UC). Three of them (30%) were symptomatic (cholangitis and remission). But during the follow up (145 mo, range 72-228) none developed cirrhosis or CC and in no case a second C showed features of large bile duct changes. However, in a second C in 3 cases (30%) intrahepatic bile duct changes were observed (6-9 years, mean 8). Also 3 out 6 rebiopsied pts (all with intrahepatic changes) progressed from stage I to stage II of Ludwig. While in the other 3 (5-18 years, mean 9) no histological progression was observed. In 44 pts with "classical" PSC (56% males, 16-76 years, mean 56, 60% UC, asymptomatic in 44% of the cases) during the observation period of 118 mo (range 36-228), cirrhosis was observed in 17 of 44 cases (39%), $p < 0.05$ and 6 of 44 (13%) developed a CC. **Conclusions:** Small-duct PSC had a benign course and slow progression. Cirrhosis, CC or large bile duct changes were not observed. Our results suggest that it may be a benign form and it does not represent an early form of "classical" PSC.

ARGON PLASMA COAGULATION FOR THE TREATMENT OF RADIATION INDUCED PROCTITISGONZALEZ MARÍA LAURA,¹ CARIELLO MARINA,¹ MACÍAS GÓMEZ CARLOS ALBERTO,¹ VAN DOMSELAAR FERNANDO,¹ DÁVOLOS JORGE R¹

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INTRODUCTION: Radiation-induced proctitis (RIP) is a relative common complication of pelvic radiation therapy. Medical treatment generally fails in control bleeding. Argon Plasma Coagulation (APC) is established as an alternative effective therapeutic method. However, APC usefulness and safety have not been studied in our Country. **AIMS:** To assess the usefulness and safety of APC in the management of patients with (RIP). **PATIENTS AND METHODS:** We analyzed the clinical records of fourteen patients with radiation proctitis derived to our Endoscopic Unit for APC treatment from July 2004 through March 2007. Indication for radiation therapy, onset of symptoms after the procedure, APC related complications and post treatment clinical evolution were analyzed retrospectively. Diagnosis of radiation proctitis was made based on endoscopic findings in rectal or sigmoidal mucosa. Such as single or multiple telangiectasias and/or friability or contact bleeding in patients with previous pelvic radiotherapy without any other bleeding source. Clinical outcome was classified as completely response: no recurrence of bleeding, partial response: intermittent slight bleeding or no response: without improvement or worsen of bleeding.

We used ERBE (Tubigen, Germany) APC 300 system with a 3,2 mm probe in all patients. The gas flow was 2 l/min. and the power setting used was 40 W in 2 seconds pulses.

RESULTS: Fourteen consecutive patients, (M/F: 12/2, mean age 74 (61-84 years) were retrospectively included. Male patients received RT due to prostate cancer and females for uterine cancer. Onset of symptoms after RT was 23 months (0-108). The follow up was 15 months (2-34). All patients had overt bleeding, 6 of them had anemia (3 were transfused). Only one patient received previous medical treatment and endoscopic sclerosis.

Eleven patients (79%) responded to APC treatment. Six in the first session and four required two sessions for complete response. One patient had a partial response and refused a second session. Three patients had no response. One underwent only one session, other received palliative management and the last one died from no related procedure causes. Anemia improved in all patients, no transfusions were required and no complication occurred. **CONCLUSION:** APC was useful and safe in our patients for RIP treatment and should be recommended as an available therapeutic tool in our country.

EFFECT OF GLUTEN FREE DIET IN BODY MASS INDEX IN CELIAC PATIENTSPOGORELSKY VALERIA,¹ TOBAL FEDERICO,¹ TOBAL DANIEL,¹ GENBA, Junin, Buenos Aires, Argentina.

INTRODUCTION: It is well established that a gluten free diet (GFD) has a favorable effect on symptoms of celiac disease (CD). However, only few studies focused on the effect of GFD as regards Body Mass Index (BMI), particularly in relation to overweight.

AIM: To assess gluten free diet effect on body mass index in celiac patients.

PATIENTS AND METHODS: Cross-sectional survey of the adult population using a self-report questionnaire, submitted to 50 celiac patients in Buenos Aires province, Argentina. The questionnaire included 20 questions. One of the questions made reference to height and weight at the time of diagnosis and after gluten exclusion. Under 18-year-old patients were excluded from the analysis. Dependant variables were analyzed using the t-Test.

RESULTS: Forty-four patients with celiac disease (male 7, female 37, mean age (\pm DS) 45.3(\pm 13.7) treated with GFD for 46.1 months (range 1-168) were included. Mean (\pm SD) BMI at diagnosis was 20.1(\pm 2.9) kg/m². Twelve (27.2%) patients were underweight (BMI < 18.5), thirty(68.1%) were normal (BMI 18.5-25), and two (4.5%) were overweight (BMI > 25). Mean BMI after treatment was 23.1 (\pm 2.9) kg/m² (p < 0.0001). Two (4.5%) patients were underweight (BMI < 18.5), thirty (68.1%) were normal, and twelve (27.2%) were overweight (BMI > 25). Forty-two (95%) patients have gained weight after GFD and, in some cases, they even changed categories: 11/12 of underweight patients changed to normal category and 1/12 changed to overweight; as well as 10/30 of normal patients changed to overweight.

CONCLUSION: After Gluten Free Diet a significant increase in BMI of celiac patients occurred. Although this is the desired effect on underweight patients, it should be considered that 1/4 of the patients included had overweight after the diet, which leads to increased morbidity.

PREDICTIVE VALUE OF ALARM SYMPTOMS IN COLORECTAL CANCER DIAGNOSISTOBAL FEDERICO,¹ POGORELSKY VALERIA,¹ TOBAL DANIEL,¹ GENBA, Junin, Buenos Aires, Argentina.

BACKGROUND: The existence of alarm symptoms states the need of performing endoscopic studies so as to discard colorectal cancer. However, the diagnostic value of alarm symptoms is uncertain.

AIM: To assess the predictive value of alarm symptoms for colorectal cancer diagnosis in patients without family history.

PATIENTS AND METHODS: Cross sectional survey of 294 (male 147, female 147; mean age (\pm DS) 57.4 yrs (15.57) consecutive adults with alarm symptoms referred to our endoscopic center for colonoscopy in a one year period. Patients with hematochezia, anemia, positive fecal occult blood test and weight loss were considered as patients having alarm symptoms.

RESULTS: Colorectal cancer was found in 33 (male 24, female 9; mean age 66.8 yrs (range 22-87) patients. The global positive predictive value of alarm symptoms was 11.2%. Colorectal cancer was detected in 19 (male 14, female 5; mean age 66.9 yrs (range 32-87) patients out of 164 with hematochezia (VPP 11%, VPN 89%, S 57%, E 44%); in 8 (male 4, female 4; mean age 69.6 yrs (range 53-76) patients out of 60 with anemia (VPP 13.3%, VPN 83.3%, S 24%, E 80%); in 1 (male, age 80 yrs) patient out of 53 with positive FOBT (VPP 1.8%, VPN 86.7%, S 3%, E 80 %) and 5 (all males; mean age 53.4 yrs (range 22-67) patients out of 17 with weight loss (VPP 29.4%, VPN 89.9%, S 15%, E 95%).

Findings in the remaining patients were: without organic lesion (129 patients, 43.8 %), colonic polyps (58 patients, 19.7%), diverticula (47 patients, 15.9%), inflammatory bowel disease (16 patients, 5.4%), angiodysplasia (10 patients, 3.4%) and ischemic colitis (1 patient, 0.3%)

CONCLUSIONS: Only one out of ten patients with alarm symptoms had colorectal cancer. According to international studies, hematochezia is the commonest alarm symptom associated with colorectal cancer.

DIAGNOSTIC YIELD OF COLONOSCOPY IN COLORECTAL CANCER SCREENING AMONG UNDER 50-YEAR-OLD SUBJECTSTobal Federico,¹ Pogorelsky Valeria,¹ Tobal Daniel¹ GENBA, Junin, Buenos Aires, Argentina.

BACKGROUND: Screening for colorectal cancer among adults at average risk is recommended to begin at the age of 50 years. Although screening for colorectal cancer with colonoscopy among those 50 years of age or older has been shown to be cost effective, the yield from screening of persons in younger age groups is less certain.

AIM: To assess the prevalence of colonic polyps and colorectal cancer in an asymptomatic average-risk population under 50 years of age.

PATIENTS AND METHODS: Full colonoscopy was performed in all consecutive adults referred to our endoscopic center for colorectal cancer screening in a one year period. Normal colonoscopy was defined as that without colonic polyps and colorectal cancer. Patients with hematochezia, anemia, weight loss, recent change in bowel habits and family history of colorectal cancer were excluded.

RESULTS: Out of the 134 subjects (63 males and 71 females, mean age 40.32 \pm 7.04 yrs) included, 114 (85%) had normal colonoscopy. Colonic polyps were found and resected in the remaining 20 subjects. No colorectal cancer was detected. Additional findings included: diverticula (9 subjects), inflammatory bowel disease (4 subjects) and colonic angiodysplasia (1 subject).

CONCLUSION: Colonic polyps are rare in the subjects included in our study. No colorectal cancer was detected. The low yield of screening colonoscopy in this age group is consistent with current recommendations about the age at which to begin screening in persons at average risk.