ΠΡΟΣΚΕΚΛΗΜΕΝΕΣ ΑΝΑΚΟΙΝΩΣΕΙΣ ΕΛΛΗΝΩΝ ΕΡΕΥΝΗΤΩΝ

● STUDY OF GASTRIC EMPTYING IN PATIENTS WITH NON-ULCER DYSPEPSIA EVALUATED BY THE PARACETAMOL ABSORPTION TECHNIQUE: PRELIMINARY RESULTS

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Background: There is growing evidence for abnormal gastric emptying in a subgroup of non-ulcer dyspepsia (NUD) patients. The role of *Helicobacter pylori* (*HP*) infection in NUD is still controversial.

Aims: To determine whether gastric emptying is delayed in NUD patients and to investigate the effect of *HP* infection in these patients.

Methods: In patients with NUD 1 g of paracetamol was administered orally with 250 ml of a solid-liquid hypertonic meal after an overnight fast. Blood samples where obtained every 30 min for 3 hours and paracetamol concentrations were determined. *HP*-positive patients received eradication therapy. Four weeks after treatment, *HP* status was assessed endoscopy and gastric emptying re-evaluated.

Results: 20 patients with NUD (12 *HP*-positive and 8 *HP*-negative) and 16 asymptomatic healthy controls where included in this preliminary study. Gastric emptying was prolonged in patients with NUD compared with the control group. The mean maximum plasma concentration (Cmax) was 12.4 μg/ml and 12.7 μg/ml respectively, the mean time taken to reach this concentration (Tmax) was 96 min and 71 min respectively ($p<0.05$) and the mean time taken to reach the concentration equal to the sensitivity (1 μg/ml) of the assay (Ts) was 57 min and 37 min respectively ($p<0.01$). In the NUD group, gastric emptying was delayed in *HP*-negative patients compared with *HP*-negative patients: Cmax was 12.4 μg/ml and 13.1 μg/ml, Tmax was 112 min and 85 min ($p<0.05$), and Ts was 68 min and 50 min ($p<0.05$) respectively. We have not yet sufficient data in order to evaluate the effect of *HP* eradication on gastric emptying.

Conclusions: Our preliminary results demonstrate that gastric emptying is prolonged in NUD patients, especially in *HP*-negative ones. Further studies are needed to confirm our results.

Δημοσιεύθηκε στο Gut 1997;41(Suppl 3):A152.

● DOES *HELICOBACTER PYLORI* CagA(+) PHENOTYPE INFLUENCE GASTRIC JUICE VITAMIN C LEVELS?

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In previous studies we and others have shown that *Helicobacter pylori* (*H. pylori*) infected patients have lower gastric juice vitamin C levels, in comparison to *H. pylori*(-) patients and that *H. pylori* eradication restores these levels, which may prove potentially important in the prevention of gastric cancer. However, it is not known whether gastric juice vitamin C levels are influenced by *H. pylori* CagA phenotype.

Aim: The aim of the present study therefore, was to study the impact of *H. pylori* CagA phenotype on gastric juice vitamin C levels.

Methods: We studied a total of 30 *H. pylori*(+) patients and the results were compared with 10 endoscopically and histologically *H. pylori*(-) patients (control group), who were comparable to the *H. pylori*(+) groups for age and sex. In all patients gastric juice vitamin C levels were determined and the severity of gastritis was graded on a scale of 0 (absent) to 3 (severe). CagA was determined by immunoblotting the sera of patients against *H. pylori* antigens.

Results: Among 30 *H. pylori*(+) patients there were 20 CagA(+) and 10 CagA(-). In the entire group of 30 *H. pylori*(+) patients the mean levels of gastric juice vitamin C (mg/l) were 17.8±1.44 (SEM) and were significantly lower ($p=0.014$) than the control group 35.61±2.47. The corresponding numbers for the *H. pylori*(+) CagA(+) patients were 13.74 ±1.33 and were significantly lower than the respective levels in both the *H. pylori*(+) CagA(-) group (25.93±1.21, $p<0.01$) and the *H. pylori*(-) control group (38.61±2.17, $p=0.007$). There was a significant ($p<0.01$) inverse correlation between the gastritis score and the gastric juice vitamin C levels. In addition the gastritis score in *H. pylori*(+) CagA group (2.2±0.14) was significantly higher ($p=0.019$) than in the *H. pylori*(+) CagA(-) group (1.1±0.1).

Conclusion: These data indicate that CagA(+) *H. pylori* strains negatively influence the gastric juice vitamin C levels, most probably by inducing more intense inflammation than the CagA(-)*H. pylori* strains.

Δημοσιεύθηκε στο Gut 1997;41(Suppl 3):A110.

● DETECTION OF *H. PYLORI* napA GENE IN GASTRIC FLUID IN DUODENAL ULCER PATIENTS

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Background: *Helicobacter pylori* (*HP*) gastritis is characterised by accumulation of neutrophils within the gastric mucosa. It has been proposed that water extracts of *HP* promotes the adhesiveness of neutrophils on human enthothelial cells, which could be consistent with the fact that *HP* causes prolonged inflammation in gastric mucosa. This proadhesive activity is associated with a 150-kDa protein, the neutrophil-activated protein A (HPnapA) (D. Evans et al, 1995).

Aim: To evaluate by PCR assay the detection of HPnapA gene in gastric fluid in DU patients.

Methods: Twenty patients (13 males, 7 females, mean age 48 years, range 22-27) entered our study. All the patients had endoscopically proven DU and *HP* infection (CLO test and serum IgG Ab, ELISA). A gastric fluid sample (5 ml) was also taken from all these patients, through an one use ERCP catheter and the HPnapA gene was detected in it by PCR.

Results: From 20 patients evaluated, the HPnapA gene was detected in 4 patients (20%).

Conclusions: The detection by PCR of HPnapA gene in DU patients with proven *HP* infection (CLO test-ELISA) is applicable, but according to our results can not be considered as diagnostic. However further studies are needed for the subject.

Δημοσιεύθηκε στο Gut 1997;41(Suppl 3):A169.

● HIGH RATES OF FALSE NEGATIVE RAPID UREASE TEST (CLO) IN PATIENTS WITH UPPER GASTROINTESTINAL BLEEDING (UGB)

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Objectives: To evaluate the validity of CLO-test in diagnosing *Helicobacter pylori* (*HP*) colonization, in patients with UGB.

Design: Prospective study. Upper GI endoscopy was done, during the 1st 24 hours, to all patients with UGB admitted to the Department, for a period of 8 months. Patients with variceal bleeding, recent treatment with proton pump inhibitors and any *HP* eradication therapy were excluded. At least 4 biopsies (antral-body mucosa) were obtained for CLO test and histologic (modified Giemsa stain) documentation of *HP* colonization, and blood was taken for *HP* serology (ELISA IgG. DIESSE). Fisher's exact test was used for statistical analysis.

Results: 55 consecutive patients (m: 35, age 18-90 y) were included. 29 (53%) had taken NSAIDs, 18 (33%) were smokers and 9 (16%) were heavy drinkers. 29 (53%) had only duodenal ulcer (DU), 15 (27%) had gastric ulcer (GU) and/or gastric erosions; 9 (16%) had pathology (DU, GU, erosions) in both, stomach and duodenum. IgG(+) were 49/55 (89%), CLO(+) were 22/55 (40%) and *HP*(+) by histology were 30/55 (56%). Fresh blood or coffee ground substance was observed in the stomach of 8 (24%) out of 33 CLO(-) and of 3 (14%) out of 22 CLO(+) patients (p=0.272). Of 33 CLO(-), only 6 were IgG(-), that means 27 CLO(-) were IgG(+) (82%). *HP*(+) by CLO or histology were 34/55 (62%). 21 (38%) patients were *HP*(-) by both. CLO and histology; out of them, 16 (76%) were IgG(+) and 18 (86%) had taken NSAIDs. 21 (64%) of 33 CLO(-) and 10 (45%) of 22 CLO(+) patients, had taken NSAIDs (p=0.146).

Conclusions: 1. CLO test, performed during the first 24 h, in patients with UGB, seems to be unreliable to detect *HP* infection; thus more sensitive tests, such as serology, should be used. 2. The combination of CLO and histology improves the detection rate but underestimates the *HP* status. 3. Though, only 11 patients had apparent blood in the stomach, possibly due to "washing out" through the nasogastric tube or to, in some cases, "late" endoscopy, the observed proportional difference of CLO(+) vs CLO(-) among them, may be, incriminate blood for the "false" CLO results. 4. In both CLO and histology, *HP*(-) patients, IgG antibodies were found in a high rate (76%), and NSAIDs ingestion was reported in 86% of them; in addition, proportionally more CLO(-) than CLO(+) patients had ingested NSAIDs. Thus, the possibility that NSAIDs ingestion may be responsible, among others, for the results obtained, should be raised.

Δημοσιεύθηκε στο Gut 1997;41(Suppl 1):A76.

● RANDOMIZED STUDY COMPARING OMEPRAZOLE (O) AND RANITIDINE (R) AS ANTISECRETORY AGENT IN "QUAD" THERAPY PROVIDED AS A SECOND CHOICE TREATMENT IN PATIENTS WITH DUODENAL ULCER

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Since the beginning of *Helicobacter pylori* (*HP*) era, "quad" regimens have been proved efficient on *HP* eradication, but they are not widely accepted as initial therapy because of lack of patients' compliance. Successful eradication of *HP* infection following a failed initial treatment is very difficult to achieve for unknown reasons. In addition, very few data are available on the efficacy of the antisecretory agent induced in "quad" regimens.

The **aim of our study** was to compare the efficacy of either O or R combined in a "quad" regimen including tripotassium dicitrabismuthate (B), metronidazole (M) and tetracycline hydrocloride (T) as a second choice treatment for *HP* eradication in patients with duodenal ulcer (DU) whose initial treatment had failed.

Patients and Methods: 77 patients (mean age±sem: 45.6±2.6 years) with DU, who have failed to eradicate *HP* with double or triple regimens, none of which contained M, were randomly assigned to receive B 600 mg tid+M 500 mg tid+T 500 mg tid combined with either O 20 mg bid (Group I, 46 patients) or R 300 mg bid (Group II, 31 patients) for 14 years. The two groups were comparable for sex, age and smoking. Endoscopy was performed one month after the completion of treatment and *HP* eradication was considered successful when both histology & CLO-test were negative. Stat: t-test, X2-test.

Results: 66 patients were re-examined. Complaints for mild side-effects (nausea, metallic taste) were frequently reported during treatment (telephone communication in which we encouraged them to continue) but only 5 patients did not complete therapy. Additionally, 6 patients were lost. Success rate was 26/40 (65% CI: 50-80) for Group I and 14/26 (54% CI: 33-74) for group II (p=0.36). Smoking did not influence eradication rate.

Conclusions: 1) Omeprazole 20 mg bid and ranitidine 300 mg bid were equally effective as antisecretory agents combined with B,M,T ("quad" regimen) in DU patients who have failed to eradicate *HP* with a previous treatment. 2) The mediocre eradication rate with this regimen howbeit the good compliance, could be attributed either to the patient selection (2nd line treatment) or to the high percentage of *HP* resistance to M in our area (50%).

Δημοσιεύθηκε στο Gastroenterology 1997;112:A219.

● COMPARISON OF TWO 10-DAY REGIMENS OMEPRAZOLE STANDARD TRIPLE THERAPY AND OMEPRAZOLE-AMOXYCILLIN-CLARITHROMYCIN FOR ERADICATION OF *HELICOBACTER PYLORI* (*HP*) INFECTION AND HEALING OF DUODENAL ULCER

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It has been claimed that omeprazole enhances the efficacy of standard triple therapy (bismuth, metronidazole, tetracycline, BMT) and that in combination with amoxycillin-clarithromycin (OAC) is very efficacious in eradicating *HP* infection. The aim of this prospective, randomized, investigator-blinded, single center trial was to compare the efficacy of two 10-day regimens, OAC and Omeprazole-BMT (OBMT), in eradicating *HP* and healing duodenal ulcer (DU). 124 patients with active DU were randomized to receive for 10 days either OAC (O 20 mg bid, A 1 g bid, C 0.5 g bid, N=68) or OBMT (O 20 mg bid, colloidal bismuth subcitrate 120 mg qid, M 0.5 g tid, T-Hcl 0.5 g qid, N=58). All patients were pretreated with O 20 mg bid for 4 days. Patients' symptoms were scored and endoscopy was performed before and 6 weeks after treatment. The presence of *HP* infection and its successful eradication was sought by histology (Giemsa), immunohistochemistry [rabbit anti-*HP* monoclonal antibody (DAKO)] and CLO tests on antral, body and fundic biopsies. Compliance and side effects of the treatment were determined by a standard questionaire form. Statistical analysis was performed using the intention to treat method. Four patients in each group felt well and did not return for rebiopsy leaving 64 patients in the OAC and 54 in the OBMT groups which were comparable for age, sex, smoking, occasional NSAID use, current or prior bleeding episodes. All DUs healed after therapy. *HP* infection was eradicated in 49/64 (77%) patients in the OAC group and 38/54 (70%) in the OBMT group ($p>0.1$). OBMT was equally effective in eradicating *HP* infection in bleeders and non-bleeders whereas OAC was more efficacious in non-bleeders ($p<0.05$). The effect of smoking on treatment was negative but not significant. Of the patients completed the trial six [2/64 (3.1%) in OAC, 4/54 (7.4%) in OBMT, $p>0.1$] were non-complaints (<95% of drugs taken). OBMT was associated with a higher incidence of side effects ($p<0.05$). Thus, OAC and OBMT were equally effective in eradicating *HP* infection but their efficacy was lower than reported in other trials (90-97%). OBMT may be better in bleeders but side effects are common and patients' compliance is lower.

Δημοσιεύθηκε στο Gastroenterology 1997;112:A209.