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## The vagus nerve participates to the prolonged effect of CCK-8 on intestinal motility in post-Nippostrongylus brasiliensis-infected rats

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stimulatory conditions (up to  $174 \pm 33\%$ , C.I. 1.035–2.456). Analogous results were found for IFN- $\gamma$ .

**Conclusion:** IL-10, generally considered as an immunosuppressive cytokine, seems to have stimulatory effects on proinflammatory cytokine production in the inflamed CD ileum.

**P0979 THE VAGUS NERVE PARTICIPATES TO THE PROLONGED EFFECT OF CCK-8 ON INTESTINAL MOTILITY IN POST-NIPPOSTRONGYLUS BRASILIENSIS-INFECTED RATS**

J. Gay, J. Fioramonti, R. García-Villar, L. Buéno, INRA, Neuro-Gastroenterology & Nutrition Unit, Toulouse, France

**Background:** In man, severe intestinal infections are often followed by symptoms of irritable bowel syndrome in which abnormal responses to hormones or neurotransmitters such as CCK have been described. In rats, the nematode *Nippostrongylus brasiliensis* (*Nb*) induces, at jejunal level for several weeks an enteric nerve remodeling, and an exaggerated response to CCK. As vagal afferences are known to be involved in several effects of CCK, the aim of the study was to determine the role of the vagus nerve and of modifications in functional responses of CCK receptors in the abnormal motor action of CCK in post-infected rats.

**Methods:** 4 groups of 8 male Wistar rats were used: 2 control groups were matched with 2 groups infected at day 0 with 3000 third-stage larvae of *Nb*. At day 30, 3 groups of NiCr electrodes were implanted 10 cm apart in mid-jejunum. Myoelectrical recordings started 7 days after surgery. The duration of disruption of the migrating myoelectrical complexes (MMC) after CCK-8 (50  $\mu\text{g}/\text{kg}$ , ip) was evaluated in both control (groups 1, 3) and post-*Nb*-infected groups (groups 2, 4): 1) under baseline conditions (groups 1, 2, sham vagotomy); 2) after atropine (1 mg/kg, ip, 30 min before CCK, groups 1, 2); 3) after bilateral subdiaphragmatic vagotomy (groups 3–4); 4) after pretreatment with CCK-A (devazepide) and CCK-B (L-365260) receptor antagonists (100  $\mu\text{g}/\text{kg}$ , ip, 45 min before CCK, groups 1–4).

**Results:** CCK-8 disrupted the MMC pattern for  $99 \pm 4$  min in post-*Nb*-infected rats and  $46 \pm 5$  min in controls ( $P < 0.05$ ). These values were reduced by atropine in *Nb* rats ( $38 \pm 7$  min;  $P < 0.05$ ) but not in controls ( $42 \pm 6$  min). Bilateral vagotomy reduced the response to CCK in *Nb* rats ( $43 \pm 8$  min;  $P < 0.05$ ) but not in controls ( $50 \pm 3$  min). At the dose of 100  $\mu\text{g}/\text{kg}$ , devazepide and L-365260 did not modify the CCK response in controls. In *Nb* rats, devazepide abolished the increased response to CCK in sham and vagotomized rats, while L-365260 reduced the increased response in sham and abolished it in vagotomized rats.

**Conclusion:** These results indicate that during the post-infectious state, the increased action of CCK-8 is mediated through a cholinergic mechanism involving both the vagus nerve and changes in functional response of CCK-A and CCK-B receptors.

**P0981 OPPORTUNISTIC USE OF A BOWEL SYMPTOM QUESTIONNAIRE IN THE DETECTION OF COLORECTAL NEOPLASIA: A PILOT STUDY**

M. Gray, B.M. Goudie, D.A. Johnston, R.J.C. Steele, Department of Clinical Measurement, Ninewells Hospital, Tayside Research Network for Primary Care (Tayren), Dundee, United Kingdom

**Background:** Patients with colorectal cancer often disregard their symptoms and present late in the course of the disease. A questionnaire to elicit undisclosed symptoms in a high risk age group may facilitate early diagnosis and reduce morbidity and mortality.

**Aims:** To investigate the opportunistic use of a bowel symptom questionnaire in a general practice setting.

**Methods:** A pilot study has been conducted in two general medical practices in Dundee. Patients aged over 50 years attending the practice for any reason were opportunistically offered a questionnaire about bowel symptoms. A positive response to any question prompted assessment by a general practitioner. If appropriate referral was made to a specialist where a more detailed history and flexible sigmoidoscopy were undertaken. Barium enema or colonoscopy were ordered if appropriate.

**Results:** 1161 questionnaires were returned. 252 patients had positive responses. 87 patients required referral. 27 of 87 (31%) patients presented their symptoms to the general practitioner without being prompted by the questionnaire. 60 of 87 (69%) patients who required referral were discovered to have undisclosed bowel symptoms as a result of completing the questionnaire. 8 of 60 (13%) of patients whose symptoms were detected by the questionnaire and 3 of 27 (11%) of patients who presented their symptoms to the general practitioner had adenomatous polyps. No patients had colorectal cancer.

**P0982 GASTROINTESTINAL INFECTIONS IN HIV-INFECTED PATIENTS: THE EFFECT ON OF THE INTRODUCTION OF HAART ON ENDOSCOPIC AND HISTOPATHOLOGICAL DIAGNOSIS IN AN HIV COHORT**

Stephen Hood<sup>1</sup>, Rhona Mcvey<sup>2</sup>, Stephen Hood<sup>1</sup>, Godfrey Wilson<sup>2</sup>, Bibhat Mandel<sup>3</sup>, <sup>1</sup>Dept of Gastroenterology Royal Liverpool University Hospital, Liverpool, Manchester Royal Infirmary, North Manchester General Hospital, Manchester, United Kingdom

**Objective:** To determine changing incidence of endoscopically diagnosed gastrointestinal disease in an HIV cohort, following the introduction of proteinase inhibitor (PI) and HAART (Highly active antiretroviral therapy)

**Design:** A combined retrospective casenote and histopathological review of all upper GI endoscopy performed on HIV infected individuals in 2 years prior to (1994–95) and after (1997–1998) introduction of combination antiretroviral therapy including a proteinase inhibitor (HAART).

**Setting:** Infectious disease in- and outpatient departments of a regional infectious diseases centre in Manchester, UK, from 1994–1998.

**Patients:** A cohort of 1400 HIV-infected patients

**Methods:** Combined endoscopy report, histological review and casenote survey. Comparison of number of histologically confirmed episodes of gastrointestinal disease in 2 years preceding and 2 years following the introduction of HAART was performed using Wilcoxon signed rank test. Corresponding changes in CD4 + cell count were compared following log transformation using a paired t-test.

**Results:** Proteinase inhibitor introduction was accompanied by a statistically significant reduction in the numbers of patients referred for endoscopy, although the cohort size was unchanged. The incidence of episodes of gastrointestinal disease resulting from opportunistic infections (CMV, Microspora and Isospora), other than oesophageal candidiasis were reduced. The incidence of GORD, Helicobacter-associated disease was unchanged. HAART has reduced the incidence of oropharyngeal candidiasis

**Conclusions:** The introduction of HAART has significantly reduced the incidence of endoscopically diagnosed opportunistic infections in this cohort.

**P0983 ANTI-IL-6 RECEPTOR MONOCLONAL ANTIBODY PREVENTS TH1 CELL-MEDIATED MURINE COLITIS**

H. Ito, H. Ogawa, M. Yamamoto, T. Kishimoto<sup>1</sup>, Osaka University Medical School, Department of Molecular Medicine; <sup>1</sup>Osaka University, Suita, Japan

**Background/Aims:** Proinflammatory cytokines have been demonstrated to play a crucial role in the pathogenesis of Crohn's disease. Asking if blocking IL-6 will be a novel therapy for this incurable disease, we evaluated the efficacy of anti-IL-6 receptor monoclonal antibody (anti-IL-6R mAb) in murine colitis.

**Methods:** Colitis was induced in CB17-scid mice transferred CD45RB<sup>high</sup> CD4<sup>+</sup> T cells from normal Balb/c mice. Anti-IL-6R mAb or control rat IgG was administered intraperitoneally soon after T cell transfer, followed by weekly injection. Body weight was monitored weekly. Colons were removed at 8 weeks and colitis was graded histologically as 0 (minimal) to 3 (severe). CD4<sup>+</sup> T cell expansion was evaluated by FACS. ICAM-1 and VCAM-1 expression was analyzed by immunohistochemistry, and colonic cytokine and iNOS expression was determined by RT-PCR.

**Results:** Mice treated with mAb showed normal growth while controls lost weight. Average colitis score was 0.64 for mAb treated mice, and 1.80 for controls. CD4<sup>+</sup> T cell expansion in mAb treated mice was diminished to 37% of the controls. Colonic ICAM-1 and VCAM-1 expression was markedly suppressed by mAb. IFN- $\gamma$ , TNF- $\alpha$ , IL-1 $\beta$ , IL-6, and iNOS mRNA was also reduced by the treatment. IL-4 mRNA was not detectable in either treated or control group.

**Summary/Conclusion:** Blocking IL-6 signaling abrogated colitis in mice, which suggests the therapeutic potential of anti-IL-6R mAb for human Crohn's disease.



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13 - 17 November, 1999 - Fiera di Roma  
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Rome, 21 September 1999

Dear Doctor FIORAMONTI,

We are pleased to advise you that your abstract entitled  
**THE VAGUS NERVE PARTICIPATES TO THE PROLONGED EFFECT OF CCK-8 ON INTESTINAL  
MOTILITY IN POST-NIPPOSTRONGYLUS BRASILIENSIS - INFECTED RATS**  
as one of the best submitted, has been included among the Posters of Distinction during the UEGW Roma '99 scheduled  
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| Session:             | <b>Posters of distinction..</b> |
| Date:                | <b>17/11/99</b>                 |
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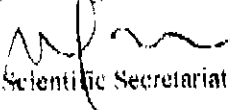
If you have already registered, your presentation is confirmed. However, if you have not registered by 30 September, regretfully, we have to consider to withdraw your presentation from the Programme and the Abstract Book. Please note the reduced registration fee is available for presenters until 30 September.

Awards will be made for the best poster presentations by the founding societies of the United European Gastroenterology Foundation (UEGF). We invite you to present also electronically following the instructions here below.

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Thank you for your contribution to UEGW Roma '99. We look forward to seeing you and remain at your disposal for further information.

With kind regards,

  
The Scientific Secretariat

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