

## OC2.5.3

## DIAGNOSTIC VALUE OF FAECAL CALPROTECTIN IN UNSELECTED OUTPATIENTS REFERRED FOR COLONOSCOPY: A MUTICENTER PROSPECTIVE STUDY

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**Background and aim:** Faecal levels of calprotectin are increased in several inflammatory and neoplastic diseases of the upper and lower gastrointestinal tract. However, the role of faecal calprotectin measurement in clinical practice is still ill defined. We assessed faecal calprotectin in consecutive outpatients referred for colonoscopy, in order to evaluate its reliability in identifying patients with significant colorectal disease.

**Material and methods:** Outpatients undergoing colonoscopy at 5 participating institutions were eligible for the study. Patients were asked to collect a faecal sample the day before examination. Written informed consent was obtained. Demographic and clinical data were collected by means of a standard questionnaire. Faecal samples were tested at a single laboratory by means of a commercially available kit (Calprest, Eurospital SpA, Trieste)

**Results:** Eight-hundred seventy patients (males 413, mean age 59.1 years, range 16-89) were consecutively enrolled. The rate of caecal and ileal intubation were 91% and 24% respectively. Mean levels of calprotectin were significantly higher in patients with neoplastic and inflammatory disorders when compared with subjects with a normal colonoscopy or with trivial endoscopic findings (such as uncomplicated diverticular disease). Calprotectin levels above the upper normal limits (> 50 mg/kg) were detected in 88% of patients with colorectal cancer, 85% of those with inflammatory conditions and 56% of those with inactive ulcerative colitis but also in 39% of patients with normal or trivial endoscopic findings. Sensitivity, specificity, PPV, NPV and accuracy for detecting "any organic disease" and colorectal cancer respectively are shown in the table. In patients referred for chronic diarrhoea, sensitivity and negative predictive value were 100% in detecting either any organic disease or cancer. In patients referred for symptoms of "suspected functional origin" (non-obstructive abdominal pain, chronic constipation etc) sensitivity and negative predictive value for colorectal cancer were respectively 85% and 99%.

Table 1

	Any disease	Cancer
Sensitivity	86%	88%
Specificity	59%	55%
Positive predictive value	25%	7%
Negative predictive value	96%	99%
Accuracy	63%	56%

**Conclusions:** In unselected outpatients referred for colonoscopy, a single measurement of faecal calprotectin is not sufficiently accurate to identify those with significant disease. However, a normal result can help in ruling out organic disease among patients with diarrhoea and those with abdominal pain and/or constipation.

## OC2.5.4

## BACILLUS CLAUSII TREATMENT OF SMALL INTESTINAL BACTERIAL OVERGROWTH IN PATIENTS WITH IRRITABLE BOWEL SYNDROME

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**Background and aim:** Irritable bowel syndrome (IBS) is a chronic disorder of unclear origin characterized by abdominal pain, bloating and disturbed defecation (IBS). The symptoms of IBS are similar to those of small intestinal bacterial overgrowth (SIBO). SIBO is a clinical condition characterized by a malabsorption syndrome due to an increase in microorganisms to a level exceeding 105 bacteria per milliliter of jejunal juice. Actually current SIBO treatment is based on empirical courses of broad spectrum antibiotics. *Bacillus clausii* is a probiotic effective in a number of gastrointestinal diseases; its clinical benefits is mainly attributed to synthesis of anti-microbial substances, competition with pathogenic microorganisms for nutrients and microbial adhesion sites, modification of toxins or toxin receptors, incomplete lactose digestion and immune system modulation in particular through the switch of Th2 to Th1 response. No data exist on the efficacy of *Bacillus clausii* in the treatment of SIBO.

**Material and methods:** We enrolled sixty (60) consecutive IBS patients (Rome II criteria) affected by SIBO. The presence of SIBO was based on the occurrence of a peak of H<sub>2</sub> values more than > 10 ppm above the basal value after 75 gr glucose ingestion. Patients were randomised in two treatment groups: group 1 received *Bacillus clausii* (each preparation containing 2 x 10<sup>9</sup> spores, Enterogermina, Sanofi-Synthelabo OTC, Milan, Italy) t.d.s. for one month; group 2 received metronidazole 750 mg/die for one week. Glucose breath test was reassessed 1 month after the end of therapy. Differences between groups were assessed by the chi square 2 test. A p value <0.05 was considered to be statistically significant.

**Results:** Breath test normalization occurred in 17/30 pts (56.6%) in group 1 and in 12/30 (40%) in group 2 (p<0.001). Incidence of gastrointestinal side effects (ie diarrhea, nausea) resulted to be lower in group 1 with respect to group 2 (p<0.05).

**Conclusions:** These preliminary findings suggest that *Bacillus clausii* showed an eradication rate similar to that of systemic antibiotics with lower risk of side effects. *Bacillus clausii* therapeutic efficacy is probably due to competition with pathogenic microflora or to Th1 response stimulation. This probiotic could represent a promising, easily-handled and safe treatment for SIBO.

## OC2.5.5

## EFFECT OF PATHOGENIC LIPOPOLYSACCHARIDE TRANSLOCATION ON HUMAN COLONIC SMOOTH MUSCLE CELL CONTRACTION

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**Background and aim:** Gastrointestinal stasis induced by lipopolysaccharide (LPS) may be associated with muscle dysfunction. In animal models, LPS suppresses contractility by inflammatory mediators but a direct effect of LPS on muscularis cannot be excluded. A recent study demonstrated that LPS translocates across colonic epithelial cells in normal and LPS-infected rats. Aim: To define if colonic mucosa exposure to pathogenic LPS may affect muscle cell contractility and if this effect could be related to LPS translocation.