Conclusions: 1) The symptom profile with suboptimal fundoplication poorly parallels observed functional abnormalities, 2) In every case, symptomatic fundoplications could be characterized by one or more functional abnormality of either position, movement, or transit across the gastroesophageal junction, 3) Standard methods of symptom assessment are deceiving in the post-surgical evaluation of fundoplication.

G0472

INTERACTION OF *HELICOBACTER PYLORI* (H.p.) EXTRACTS WITH BASIC FIBROBLAST GROWTH FACTOR (bFGF): SUSPENSION OF H.p. BUT NOT FILTRATE INTERACTS WITH bFGF AND DECREASES CELL MIGRATION. H. Ernst, S. Winkler, A. Foryst, K. Vogt*, H. Lochs Depts. of Medicine IV and Microbiology*, Charité, Berlin, Germany

Background: H.p. predisposes to peptic ulcer disease. bFGF is able to stimulate the migration of epithelial cells during wound healing and is localized in epithelial cells, in basement membranes and the extracellular matrix. Recent findings suggest that H.p. might interfere with the activation of bFGF from extracellular matrix. Here we determined the effect of H.p. suspension or H.p. filtrate and addition of bFGF on cell migration
Method: Monolayers of intestinal epithelial cells (IEC-6) were wounded with a razor blade (3 separate wounds per dish). The wounded monolayers were incubated for 24h with serial dilutions of H.p. suspension (NCTC 11637) ($2x10^7$ bacteria/ml and 4.5 ng/ml bFGF; $1x10^7$ bacteria/ml and 4.5 ng/ml bFGF), filtrate ($2x10^7$ bacteria/ml passed through a 0.2 mm filter and 4.5 ng/ml bFGF; $1x10^7$ bacteria/ml passed through a 0.2 mm filter and 4.5 ng/ml bFGF), serumfree medium with bFGF (4.5 ng/ml bFGF) (control) or serumfree medium (control). The number of IEC-6 cells observed across the wound border in a standardized wound area was assessed in a blinded fashion. At least nine wounds per group were assessed.
Results: The mean number of migrated cells/standard wound per group was decreased by addition of H.p. suspension ($2x10^7$ bacteria/ml) to bFGF (4.5 ng/ml bFGF) (8.3 ± 2.2, mean ± SEM) compared to addition of bFGF (4.5 ng/ml bFGF) alone (15.5 ± 3.4). Differences were at the border of statistical significance. Incubation of bFGF with filtrate of H.p. did not decrease cell migration.
Conclusion: Suspension but not filtrate of H.p. decreases the effect bFGF on cell migration. Products of damaged H.p. may impair the physiological process of cell migration via interaction with bFGF.

● G0473

SINGLE EXPOSURE OF WOUNDED CELL MONOLAYER TO EXTRACTS OF *HELICOBACTER PYLORI* (H.p.) BUT NOT OF COCULTURE WITH LIVING H.p. DECREASES CELL MIGRATION VIA A REDUCED EXPRESSION OF TGFβ1. H. Ernst, S. Winkler, A. Foryst, K. Vogt*, H. Lochs. Depts. of Medicine IV and Microbiology*, Charité, Berlin, Germany

Background: H.p. predisposes to peptic ulcer disease. The mechanism by which H.p. produces these effects is unclear. H.p. may impair the process of gastric mucosal repair. Cell migration, cell proliferation and expression of TGFβ1 play a key role in wound healing. Here we determined the effect of H.p. suspension, H.p. filtrate or coculture with H.p. on cell migration and assessed the expression of TGFβ1 by quantitative mimic RT-PCR. **Method:** Monolayers of intestinal epithelial cells (IEC-6) were wounded with a razor blade (3 separate wounds per dish). The wounded monolayers were incubated for 24h with serial dilutions of H.p. suspension (NCTC 11637) ($6x10^8$cfu/ml), H.p. filtrate ($6x10^8$cfu/ml), C. jejuni filtrate or suspension ($6x10^8$cfu/ml), LPS, coculture with H.p. or serumfree medium (control). The number of IEC-6 cells observed across the wound border in a standardized wound area was assessed in a blinded fashion. Experiments were performed in triplicate. The effect of bacterial suspension or filtrate on cell proliferation was assessed using Cell Titer 96®AQueous kit from Promega. Expression and quantitation of TGFβ1 and β- Actin mRNA was assessed using competitive mimic RT-PCR. **Results:** The mean number of migrated cells/standard wound per group was decreased by addition of H.p. filtrate (26 ± 6.6[SEM] vs control 42 ± 8.1; $p < 0.05$) or suspension (37 ± 8 vs control 42 ± 8.1; $p < 0.05$). Addition of suspension or filtrate of C. jejuni or LPS in different doses (15×10^{-5} g/petri dish to 0.46×10^{-5}g/petri dish) did not decrease cell migration. After coculture with living H.p. there was no statistical significant decrease (91 ± 12 vs control 86.5 ± 12.6) of cell migration. Cell proliferation was not affected by 24 h incubation with suspension or filtrate of H.p.. Expression of β-actin was constant in all groups (3.3 attomole/μg RNA) and expression of TGFβ1 was 50% of control value ($2.x10^{-2}$attomole/μg RNA vs control $4x10^{-2}$attomole/μg RNA) after incubation with filtrate and 12.5% to 50% of control value($0.5x10^{-2}$attomole/μg RNA; $2.x10^{-2}$attomole/μg RNA vs control $4x10^{-2}$attomole/μg RNA) after incubation with serial dilutions of H.p. suspension. **Conclusion:** Suspension or filtrate of H.p. decrease cell migration via reduced expression of TGFβ1. LPS or coculture of Hp. does not decrease cell migration. Products of damaged H.p. may impair the physiological process of cell migration.

● G0474

PANTOPRAZOLE 40 MG AND 20 MG ARE EQUIVALENT IN PREVENTION OF RELAPSE OF REFLUX ESOPHAGITIS. J. Escourrou, R. Fiasse, § A. Saggioro, ‡ D. Vaira, # H. Geldof, ¶ R. Fischer,* C. Maier.* CHU Toulouse Ranqueil, Toulouse, France; § UCL Cliniques St Luc, Brussels, Belgium; ‡ Ospedale Umberto I, Mestre, Italy; #Ospedale S. Orsola, Bologna, Italy; ¶ Ijsselland Ziekenhuis, Capelle, Netherlands and *Byk Gulden, Constance, Germany.

AIM: To compare the efficacy and tolerability of pantoprazole (PAN) 40 mg and 20 mg as a relapse prophylaxis over 1 year for reflux esophagitis patients previously healed with PAN or omeprazole (OME).
METHODS: Patients with reflux esophagitis (GERD) Savary/Miller stage II or III previously healed on PAN 40 mg or OME 20 mg for 4-8 weeks in a multi-center study in Belgium, France, Italy and the Netherlands were randomised to receive, double-blind, either 20 mg or 40 mg PAN once daily for up to 1 year. Follow-up visits were performed every 3 months with endoscopies at 6 and 12 months or when patients perceived GERD symptoms on at least 3 consecutive days. The primary parameter was time until endoscopically proven relapse of GERD and secondary parameters were time until symptomatic relapse, laboratory values and adverse events (AE).
RESULTS: 396 patients were included in this study with 203 receiving 20 mg PAN and 193 receiving 40 mg PAN. Estimated endoscopic relapse rates at 6 and 12 months were 16% and 28% respectively for the 20 mg group, and 7% and 19% respectively for the 40 mg group (Kaplan-Meier). Based on the 90% CI of the difference in the 12 month relapse rate, therapeutic equivalence of 20 mg and 40 mg PAN was concluded (equivalence range: ± 20%). Symptomatic relapse rates at 12 months were 21% and 17% for the 20 mg and 40 mg groups respectively and these were also therapeutically equivalent using the same approach as above. AE were reported by 97/396 patients (24%): 33 were considered by the investigators to be possibly related to study medication and 2 (substernal chest pain and diarrhea) to be definitely related. The percentage of patients reporting AE were similar in the two groups. The most common AE considered possibly or definitely related to PAN were increase in SGPT (2%), increase in SGOT (1%), diarrhea (1%), and abdominal pain (1%). Fourteen serious AE were reported in 14 patients, of which 3 led to premature study discontinuation. Only isolated changes in clinical laboratory values in some patients were observed throughout the study. Serum gastrin increased slightly but without clinical relevance.
CONCLUSIONS: Pantoprazole 20 mg and 40 mg are therapeutically equivalent and well-tolerated in prevention of endoscopic and symptomatic recurrence of reflux esophagitis.
This study was sponsored by Nycomed and Byk Gulden.

G0475

LACK OF BIOCHEMICAL CORRELATION BETWEEN THE PROTECTIVE EFFECT OF PROSTAGLANDINS AND NITRIC OXIDE PATHWAY ON NSAID-INDUCED GASTRIC INJURY. J. Esteban[1], J.M. Herrerías Jr. [2], M.M. Espinosa[1], J.A. Martín, M.A. Rodríguez[1], V. Motilva[2], C. Alarcón[2], M.J. Martín[2], P. Hergueta[2] and J.M. Herrerías[2]. 1- Servicio Central de Investigación en Ciencias de la Salud. Universidad de Cádiz. Spain. 2- Servicio de Aparato Digestivo. Hospital Universitario Virgen Macarena. Sevilla. Spain.

In recent reports we have proved that NSAIDs induce a doses-dependent decrease in cGMP concentración in gastric mucosa. We have also shown that the use of phosphodiesterase inhbitors prevents NSAID-induced gastric toxicity. On the other hand, prostaglandins have a protective activity on NSAID-induced gastric injury. Besides, the induced biochemical actions can be superposed to those induced by NO and its second messenger, cGMP, on gastric mucosa. For this reason we can deduce that there may be a relation between these systems. In order to check this possibility we have investigated the interaction between misoprostol (200 mcg/Kg, p.o.) and ODQ (selective inhibitor of the nitric oxide dependent guanyl-cyclase) (3 mg/Kg, s.c.) on gastric injuries induced by the administration of aspirin (100, 300 and 500 mg/Kg, p.o.). Three hours after NSAID administration the animal is anesthetized, the stomach removed and the aspirin-induced gastric erosions measured in mm^2. The mucosa is scraped and frozen at -80°C until the later cGMP determination by RIA. The quantity of proteins is determined by means of Lowry method. The results show that ODQ does not induce gastric injury alone, but increases the gastric toxicity of aspirin. On the contrary, it does not modify the protective effect of misoprostol on aspirin-induced gastric injury. Both, ODQ and aspirin administration decrease the cGMP concentration in gastrin mucosa (in a greater degree when associated). However, misoprostol administration does not modify the cGMP intragastric concentration when it is administered neither alone, together with ODQ, aspirin or in association with both of them. As a conclusion we can say that the protective mechanisms mediated by NO or by prostaglandins seem to be independent. Moreover, cGMP does not seem to mediate the aspirin-induce gastric damage, but it does participate in later regeneration mechanisms.