Response of human intestinal epithelial cells to gastrointestinal hormones

SIR,—I am writing to you with reference to the recent article by Simopoulos et al (Gut 1989; 30: 600–4) which described the response of ‘human intestinal epithelial cells’ to a number of gastrointestinal hormones.

I was interested by the responses these authors described and by the cells used as I am aware of the difficulties of culturing fetal or adult gastrointestinal mucosa. I therefore checked the Flow catalogue and discovered that the cells were derived from human ileum and jejunum and were described as ‘epithelial-like’ rather than epithelial. In addition the Flow catalogue indicated that the source of the cells was the American Type Culture Collection and gave the ATCC CCL number. The ATCC catalogue describes the history of these cells (established in 1955) and gives a characterisation of these cells indicating that the cells have a number of HeLa markers and that the cell line was probably contaminated by HeLa cells (ATCC Catalogue 1988 6th ed 5–6). If these cells are in fact HeLa cells it means that the results published in this paper have no relevance to the responsiveness of human gastrointestinal cells to gastrointestinal hormones. Because of the paucity of publications in this area I believe that it is important to clarify this matter as I believe that this paper could be widely cited in future publications. It also illustrates the danger of using cells and cell lines which have not been shown to express properties of the tissue of origin, in this case either brush border enzymes or mucin.

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Quality of life and inflammatory bowel diseases

SIR,—The health costs and the socioeconomic consequences caused by inflammatory bowel disease are a matter of controversy. In a recent paper based on the data of the German Social Security System (Gut 1989; 30: 367–70), Sonnenberg refers to the period 1982–1986, when 279000 workers per year were granted a disability pension because of all causes of diseases. In this group 264 patients per year with Crohn’s disease and 153 patients per year with ulcerative colitis were recorded. Disability occurred more frequently in patients with Crohn’s disease particularly in women and in subjects younger than 40 years; in ulcerative colitis a bimodal age distribution was found. For both the diseases a higher frequency was observed in white than in blue collar employees. On the basis of these data, the author concludes that inflammatory bowel diseases have severe socioeconomic implications bearing a greater risk of disability, particularly in young people, when compared with all the other diseases.

In our opinion such data cannot be representative of the actual frequency of disability caused by inflammatory bowel disease, as the total number of patients with ulcerative colitis and Crohn’s disease is not given. Regarding the reported existence of a higher frequency of disability associated with Crohn’s
disease, we must consider that in Germany the frequency of Crohn's disease is higher than ulcerative colitis, being the incidence of the diseases 4-2 v 2.9/100 000 inhabitants/year.1

Moreover, the other reports existing in literature did not document either a reduction of working capacity, or of social and family life in patients with inflammatory bowel disease. In a Danish study it has been observed that 90% of ulcerative colitis patients ‘work normally’;2 the percentage of Crohn’s disease patients with a normal working capacity does not significantly differ from the controls.4 In a Swedish study, after a follow up of 14 years, 89% of patients with Crohn’s disease had a ‘good’ quality of life;5 a better quality of life was registered in the case of segmental involvement of the colon or ileum.6 Even after surgery, the percentage of patients with a good quality of life is still high, being of about 85–95% for both the diseases.7 Finally, a disability pension received because of the disease has been found in 3% of Crohn’s disease cases but in no case of ulcerative colitis.3

In a preliminary study, we too, have found that the quality of life is not reduced in 88 inflammatory bowel disease outpatients periodically followed in our Department. In order to evaluate their health status and the quality of life, all the patients were asked about the daily life activities (work, hobbies, social life, presence of abdominal pain, etc . . .) using the index of Grogono-Woodgate.8 For each item there is a score ranging from 1 to 4; the sum of the scores obtained in each month divided by 12 gives the ‘health year’. A ‘health year’ equal to 1 represents the state of complete well being. By using this index it has been possible to document the changes of life style induced by the disease during a period of 12 months. As regards the clinical features of the patients, the mean age was of 35 and 40 years, for ulcerative colitis and Crohn's disease respectively, at the time of interview; the disease duration was of about seven years; 51% of Crohn’s disease and 22% of ulcerative colitis underwent surgical treatment and finally, each patient was hospitalised at mean twice from the onset of the disease. A fairly good quality of life was registered, with a health year equal to 0-9 for ulcerative colitis and 0-8 for Crohn’s disease. The patients did not complain of a reduction of working capacity, of family and social life. Despite the disease, 83% of the patients went on doing the same job; only 10% had to change their job; 7% of the total retired early because of the disease. We have to emphasise that all the patients who changed work or retired, had been operated on; among the patients (four Crohn's disease; two ulcerative colitis) who retired, 83% of them were over the age of 45 years. Moreover, we found that not the disease itself, but the clinical activity seems to negatively influence life style, as, during relapses, 58% of ulcerative colitis patients and 76% of the Crohn’s disease patients complained of a reduction of working capacity; however, depression was present in 70% of Crohn’s disease and 91% of ulcerative colitis.

We recognise that the problem of disability exists and should not be underestimated as patients with inflammatory bowel disease are generally young and have to live with a chronic disease for many years; moreover they need frequent hospitalisation and continuous therapy. Until now, the data available are scarce and not easily comparable, so that definite conclusions relating to such problem cannot be given. For this reason we think that more accurate studies are necessary in order to clarify the real disabling consequences of inflammatory bowel disease.

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References

Reply
SIR—1 appreciate Drs Tragnone’s and Lanfranchi’s concern that further studies are important for our understanding of the disabling sequelae inflammatory