Letters

Letters to the Editor

Recovery from sedation in day units

Sir,—There can be little doubt that day units offer advantages to both hospitals and patients for minor surgical and investigative procedures. But there is a danger that pursuit of these advantages could erode standards to dangerous levels. The safety and ease of the progress of the patient through day units depends on the medical and administrative practices implemented in such units.

In the case of patients who attend the day unit of this hospital for gastroscopy, the endoscopist administers an intravenous benzodiazepine as sedation. After the procedure, patients rest in a quiet room and are allowed to leave when they feel adequately recovered. All patients are advised that they will not be fit to drive and should arrange to be accompanied home by a responsible adult.

Recently we monitored a group of consecutive patients attending our day unit. Over five weeks 85 patients attended for upper gastrointestinal endoscopy, 40 women and 45 men, aged 17 to 84 years. We noted the times of their arrival, of the administration of the sedative, and of their discharge, and the dose of the benzodiazepine they had received. We found that the time from the administration of the intravenous sedative to the time the patient left the unit was unexpectedly short (mean 1 hour 23 minutes—30 minutes). Of the patients given diazepam there was no correlation between dose and time to discharge (r=0.009, p>0.05), but there was a significant correlation for those given midazolam (r=0.41, p<0.001). For the whole sample (n=85), however, there was a stronger negative correlation between time to discharge and the time spent in the unit before the procedure (mean 2 hours, range 45 minutes—3 hours 45 minutes r=0.3, p<0.02). It seems overall that the time spent in the unit before the procedure is the best predictor of recovery time.

As psychologists concerned in the assessment of impairment after centrally acting drugs we find these rapid departures startling. We would be most interested in comments from your readers.

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¹³C-urea breath test for Helicobacter pylori infection

Sir,—We read with interest the recent paper by Dill et al on the 'Evaluation of ¹³C-urea breath test in the detection of Helicobacter pylori and in monitoring the effect of tri-potassium dicitrato-bismuthate in non-ulcer dyspepsia' (Gut 1990; 31: 1237–41). In this study the authors used 250 mg of ¹³C-urea per patient.

We have recently conducted a study comparing the ¹³C and ¹⁴C-urea breath tests in Helicobacter pylori positive patients both before and at least one month after treatment. We found 100% agreement between the two tests and obtained just as good discrimination between positive and negative patients with 125 mg (n=10) and 75 mg (n=13) of ¹³C-urea as with 250 mg (n=9). We agree with Logan et al that excellent results can be obtained with 100 mg of ¹³C-urea. However, it is a further point that saving without jeopardising accuracy can be achieved by administering only 75 mg of the stable isotope per patient. Others have had similar experience.

Since the "¹³C-urea test was first described by Graham et al in 1987 the analysis of ¹³C in breath samples collected during the test has proved to be a major drawback to using the test in routine clinical practice. It is necessary to use isotopic ratio mass spectrometry (IRMS) to measure ¹³C enrichment in CO₂ because ¹³C changes of less than 1 part per thousand need to be determined. Before the actual ¹³C measurements take place, ¹³C must be purified from other breath gases. This has been achieved by a cryogenic purification unit linked to the IRMS. Breath analysis on such systems is slow (about 20 minutes per sample) and costly (0.5–1.0 liquid nitrogen per sample) and requires a continuous dual inlet IRMS for the final ¹³C measurement.

In our own study we have used an automated breath ¹³C analyser (ABA) utilising fast and simple chromatographic purification and a single inlet IRMS. The ABA consists of a Roboprep-G purification system linked to a Traceamass stable isotopic analyser (European Scientific, Crewe, UK). Briefly, each breath sample is automatically injected into the purification unit by a continuous flow of helium. Water vapour is removed by a magnesium perchlorate trap. A gas chromatograph (75°C) then separates CO₂ from N₂, and O₂ before the CO₂ is swept by the helium gas into the stable isotope analyser for ¹³C enrichment measurement. Breath samples were measured against a reference gas (5% CO₂, balance N₂) which had a delta ¹³C value of –41 to 60 per 1000 (ε PDB). The ¹³C enrichments of breath samples were expressed as a percentage enrichment (5% ¹³C) over the patient's own baseline (0 min) delta ¹³C value. This technique for analysing ¹³C breath samples proved to be easy to use, fast (5 minutes analytical cycle time), and low consumable cost (GC grade helium).

Patients fasted overnight before the test. A nutrient dense drink (20 g Calogen LCT emulsion, 15 g Maxipro HBV powder, 40 g Caloreen glucose polymer, 15 g Crusha syrup, and 300 ml water) was followed by the dose of ¹³C-urea in 50 ml water. Breath samples were collected at 0, 20, 40, and 60 minutes after drinking the ¹³C-urea solution by using an alveolar breath collection bag. At each breath collection 2x20 ml aliquots of breath were drawn from the bag to fill two septum capped evacuated tubes. These samples were then sent to Europa Scientific for analysis of ¹³C enrichment. The ¹³C isotope was taken forward in breath samples were performed within 48 hours of the "¹³C-urea breath test" and the personnel at Europa Scientific had no knowledge of the result of the former when making their own analysis.

All pretreatment (positive patient) and posttreatment (positive patient (positive by the "¹³C-urea breath test" showed a change of >51/1000 in the mean of the 40

60 minute breath samples (n=16) regardless of whether the patient had initially received 250, 125, or 75 mg of ¹³C-urea. In contrast, the one month (or greater) post-successful eradication breath test of previously H pylori patients (n=16) showed a change of <51/1000, regardless of the dose of ¹³C-urea given.

It has been our previous experience with the "¹³C-urea breath test that within as little as 24–48 hours of completing a course of colloidal bismuth subcitrate the organism which has been temporarily suppressed to undetectable levels rapidly multiplies to levels that again permit its detection using a urea breath test. These rapid returns to positivity have been shown by restricting access to a figure of 1/7 (2.1%) would be have recorded.

In our view the result 'clearance' should be avoided in the context of anti-H pylori treatment. We suggest that instead if research workers wish to study the organism which on a particular treatment or within 24 hours of discontinuing it they talk about 'suppression' and not 'clearance.' We entirely agree with Dill et al and Logan et al if one wishes to study H pylori eradication then it is necessary to wait at least one month after completing any given course of treatment before repeating tests. We suggest that assessing the H pylori state more than 24 hours and less than 28 days after treatment has little or no clinical relevance.

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BOOK REVIEW


There is much in this book which is satisfying to the reader, yet it suffers from a lack of continuity of information between widely separated chapters, which are surely complications of the multiple author syndrome. There are two sections, one dealing with concepts of carcinogenesis and the other with the clinical management of premalignant conditions. Under the format as a whole, it is well written and instructive chapters on the principles of carcinogenesis and oncogenesis. These are followed by contributions on epithelial renewal, DNA flow cytometry, and neoplastic progression in the gastrointestinal tract, and monoclonal antibodies in neoplastic and pre-neoplastic disorders of the large bowel. In the middle of these we are treated to a lengthy chapter on the subject of dysplasia, which is well written but almost entirely concerned with dysplasia in Barrett's oesophagus and chronic ulcerative colitis. There is overlap with a subsequent chapter on inflammatory bowel disease in the second section on clinical management. Surprisingly, the chapter on dysplasia includes only a short paragraph on the diagnosis and classification of dysplasia in adenomas. One chapter only is devoted to the whole subject of gastrointestinal polyps and polyposis syndromes. There is inadequate coverage of the epidemiology, genetics, pathol ogy, and evolution of the adenoma-carcinoma sequence. The problems of the malignant potential of juvenile polyposis and the Peutz- Jeghers syndrome are ignored. A major weakness in many of the chapters is the lack of emphasis on the contribution of epidemiology to our understanding of premalignant states. In sufficient space is given to methods of investigation, particularly endoscopy. The main objective in the study of premalignant conditions and histopathological lesions must be prevention and early detection of cancer with reduced mortality. In the book provides no sense of thrust in this direction. It is a collection of essays, most of them individually very good, but without the continuity which makes for easy reading. A last criticism. Please could Duke's name been added correctly. It is the Duke's classification not Duke's classification. The production of the book is good with clear print and microphotographs of good quality. A pity that it leaves something to be desired.

B C MORSON

NOTES

Computers in Endoscopy

The 7th International Symposium on Endoscopic Ultrasonography will be held in Munich, 14–15 June 1991. Information from: Dr med Thomas Rösch, 11 Medizinische Klinik und Poliklinik der TU, Klinikum rechts der Isar, Ismaninger Strasse 22, D-8000 München 80, Germany. Tel: 089/4140 2263; fax: 089-4140 2747.

XVth International Update on Liver Disease

The XVth International Update on Liver Disease will be held at the Royal Free Hospital and School of Medicine, London, 11–13 July 1991. Information from: Professor Neil McIntyre, Academic Department of Medicine, Royal Free Hospital, Pond Street, London NW3 2QG. Tel: 071-794 0100, ext 3960.

British Society of Gastroenterology meeting

The 1991 Spring Meeting of the British Society of Gastroenterology was held on 10–12 April under the presidency of Professor Sir Robert Shields at the University of Manchester Institute of Science and Technology. UMIST, an important component of the vast Manchester education factory along the Oxford Road, is a new venue for the Society, but the programme was along traditional lines laid down within the last few years, with separate and extensive poster sessions each day complementing the oral presentations. There was no sign of the resurrection of the plenary session, but it is probably too soon for it to be reintroduced as a radical innovation; instead, key lectures served as central focal of the meeting. Professor S M Collins from McMaster University gave the International State of the Art Lecture on 'Interactions between the immune and motor systems of the gut.' Dr J Biarnason, the 1991 Avery Jones Research Medallist, spoke on NSAID-induced enteropathy, and Professor T J Peters gave a State of the Art Lecture on the molecular genetics of alcoholic liver disease. The inclusion of such lectures in the programme is to be commended as much as the trivial title, derived from advertising jargon, of 'State of the Art' (with the absurd implication that lectures not so designated are incomplete or obsolete) is to be deplored. Perhaps the society might, in future meetings, emulate the royal colleges by using lectures as an opportunity to commemorate distinguished members who are no longer with us. On the social front, the programme maintained its reputation for innovative local hospitality by giving the endoscopists the ultimate video experience of dinner in Coronation Street at Granada TV. Accompanying persons were given a guided tour of a working cotton mill, perhaps to give them some idea of the working conditions which their companions experienced as house officers. And so to London in the summer.

Correction

Effects of olsalazine and sulfasalazine on jejunal and ileal water and electrolyte absorption in normal human subjects by Raimundo et al, March 1991; 32: 270–6. Table II gives data on the effect of olsalazine in the human jejunum; Table V gives data on the effect of sulfasalazine in the human ileum.
13C-urea breath test for Helicobacter pylori infection.

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