symptoms were attributable to psychogenic causes. We do feel, however, that there is sufficient evidence in our data to support the notion that symptoms may be attributable to psychogenic causes in appreciable numbers of patients – greater numbers than we were able to prove had specific food intolerance.

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Drug therapy and perforated peptic ulcer

SIR,—We read with interest the recent paper by Collier and Pain (*Gut* 1985; **26**: 359–63) concerning drug therapy and perforated peptic ulcer. A recent survey in Oxford¹ confirms that the incidence of perforation has changed little since the introduction of cimetidine. As in other studies perforation in patients currently receiving cimetidine was also observed.

Although Collier and Pain's review provides confirmatory evidence of an association between non-steroidal anti-inflammatory drugs and peptic ulcer perforation, details of individual drugs which might have a particularly strong association with perforation were not given. Case controls were not available in the Oxford study but over half the 26% patients receiving non-steroidal anti-inflammatory drugs at the time of perforation were taking indomethacin. A report from Exeter² utilising case controls has confirmed that indomethacin is associated with an increased risk of perforation of duodenal ulcers.

All retrospective studies are liable to underestimate the number of patients taking non-steroidal anti-inflammatory drugs. Jorgenson's retrospective survey³ showed that less than 20% of patients suffering a perforation had taken drugs known to be associated with peptic ulceration while his limited prospective study showed the true incidence to be over 80%. Having established an association between non-steroidal anti-inflammatory drugs and perforated peptic ulcer further prospective studies with case controls are now essential to assess accurately the hazards associated with each agent. The availability of this information would enable the risks of individual drugs to be considered before they are prescribed.

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- 2 Thompson MR. Indomethacin and perforated duodenal ulcer. *Br Med J* 1980; **280**: 448.
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Reply

SIR,—We are pleased to be given the opportunity to reply to the letter of Watkins, Dennison, and Collin. The frequency of ingestion of non-steroidal anti-inflammatory drugs (NSAID) is given in the Table.

Table Frequency of ingestion of NSAID in patients with perforated peptic ulcers according to specified drugs

NSAID	Perforated duodenal ulcers	Perforated gastric ulcers
Indomethacin	31	10
Phenylbutzone	10	1
Aspirin	8	1
Piroxicam	5	4
Ketoprofen	5	1
Indomethacin suppos.	3	3
Ibuprofen	4	1
Benorylate	3	1
Diffunisal	2	1
Mefenamic acid	2	0
Others	9	4

Some patients were taking more than one NSAID.
NSAID = non-steroidal anti-inflammatory drugs.

We were unable to obtain figures for the number of individual preparations prescribed within this regional health authority from the DHSS, for reasons of commercial secrecy, and therefore correlations for individual drugs were not assessed. Thus in our paper¹ we compared the annual number of patients taking NSAID in specified age/sex groups and the annual number of prescriptions for all NSAIDs issued in this region, and showed a significant correlation in patients aged over 65, especially women. It is interesting, however, to note how frequently piroxicam was the NSAID being taken in view of the fact that it was only introduced during the latter three years of our 10 year study.

The late Morton Grossman wrote that 'the gun must be loaded in order for an explosion to occur when salicylates pull the trigger'² it would appear that certain NSAIDs are more 'trigger happy than others'; and furthermore that being over 65 and a woman makes it more likely that the gun is loaded.

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Books

The gastroenterology annual/2 Edited by F Kern Jr, and A L Blum. (Pp. 416; illustrated; \$55) Amsterdam: Elsevier, 1984.

This is the second volume in the series *The gastroenterology current annuals*, the aim of which is to provide 'thoughtful, critical, timely and thorough reviews' of important developments in gastroenterology on an annual basis.

The current volume reviews papers published between July 1982 and July 1983, and contains 11 chapters by 27 authors (none from the UK). The topics covered and the number of references given for each are:— the oesophagus (103 references); stomach and duodenum (348); pancreas (278); absorption and malabsorption (67); intestinal electrolyte transport and diarrhoeal disease (130); hormones and neuropeptides of the gut (68); immunology; (80); inflammatory bowel disease (142); vascular physiology and pathophysiology (135); basic gastrointestinal oncology (235); paediatric gastroenterology (385).

But the volume is not merely a compendium of the papers published in the period under review. Without exception I think the reviewers have covered their topics well, offering critical analysis of methodology and interpretation of papers covered, providing links between one paper and another, identifying conceptual developments as they have occurred and drawing attention to gaps in knowledge. There are of course differences in style and approach between the different groups of authors. I liked in particular the thoughtful chapter on stomach and duodenum (Koelz, Malinowska, and Muller-Lissner), the authoritative chapter by Sarles and colleagues on the pancreas, the pellucid contribution by Makhoul on hormones and neuropeptides of the gut, the gutsy (pun intended) chapter by Singleton on inflammatory bowel dis-

ease, and above all the outstanding review on basic gastrointestinal oncology by Bresalier and colleagues – this is a mine of information.

The volume meets the aims of the editors and would provide a very useful resource for everyone who wishes to keep abreast of the rapid developments in gastroenterology. I warmly recommend it. If the standards of this volume are maintained in the future, *Gastroenterology current annuals* are assured of a wide readership.

G P CREAM

'Gastroenterology revision' illustrated case histories and MCQs By R A Bradbear, C R Campbell and L W Powell. (Pp 201; illustrated; £7.95.) Edinburgh: Churchill Livingstone, 1984.

I greatly enjoyed reviewing *Gastroenterology revision*. The book is structured around 20 clinical situations based on major gastrointestinal and hepatic symptoms and signs, dysphagia, abdominal pain, jaundice, vomiting, and diarrhoea for example. The clinical presentation of each patient is followed by a series of multiple-choice questions and the diagnostic and therapeutic process evolves within the setting of a problem solving exercise.

The questions relating to the clinical situation, the development of the case history, and the solutions presented are all reasonably uncontroversial. The overall standard of both questions and answers is high. Particularly pleasing is the way in which the solutions to the questions are placed at the end of each case history and accompanies by a succinct and crisp explanation of the authors' decision. My only note of criticism relates to the quality of the figures which are, on the whole, poorly reproduced particularly the histology.

This text is not a substitute for the conventional textbook of gastroenterology. But it is a welcome and refreshing companion which will provide both education and enjoyment to senior undergraduates and gastroenterologists in training as well as the more experienced practitioner. The state aim of *Gastroenterology revision* is to teach and in this it succeeds admirably.

IAN A D BOUCHIER

Mucus and mucosa Ciba Foundation Symposium No. 109, Edited by J Nugent and M O'Connor. (Pp. 246; illustrated; £26.50.) London: Pitman, 1984.

The 14 chapters in this latest volume of the Ciba Foundation Symposium series are written by a blend of basic scientists and clinicians interested in various aspects of mucus research. Although the range of interests vary from anatomy, physiology, biochemistry and bioengineering to gynaecology, paediatrics and adult medicine, the text is remarkably uniform