

it is clear that the John Radcliffe itself recognizes this as a problem, for its 1973 Annual Report states: "Clearly, there has been more intervention in obstetrics. If this is the price that must be exacted to achieve the best results then it must be paid, but while we hear of monitoring techniques reducing intervention elsewhere, at Oxford it seems to increase operative delivery. It is a challenging matter and must be looked at clearly."—We are, etc.,

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### Endoscopy in Dyspepsia

SIR,—We would like to comment on the paper by Dr. R. J. Barnes and others (26 October, p. 214) concerning the advantage of having an endoscopy service to supplement radiological investigation of dyspepsia and at the same time to report our experience.

In the past year 79 patients complaining of dyspepsia have been referred to our unit; their age ranged from 19 to 63 years; 40 were men and 39 women. The criteria for acceptance included a multitude of symptoms short of actual pain, such as belching, flatulence, abdominal fullness or abdominal gas, heartburn, and nausea, usually associated with mild discomfort in the upper abdomen or a burning sensation in the chest occurring during, immediately after, or at varying intervals after meals. These symptoms had mostly persisted for more than two weeks. In all cases a barium-meal examination was first performed, followed by endoscopic examination of the oesophagus, stomach, and proximal duodenum with a forward-view Olympus GIF-D fibrescope as described previously.<sup>1</sup>

On barium-meal examination two patients were found to have hiatus hernia, two to have gastric ulcers, and 12 to have pyloroduodenal disease. The remaining 63 were reported to be normal. On endoscopic examination 23 patients (29.1%) had specific lesions of the oesophagus, stomach, or duodenum. One gastric ulcer, two gastric carcinomas, and three active duodenal ulcers were found, none of which had been reported on barium-meal examination. Duodenal ulceration was found in 11 patients and duodenal scarring without active ulceration in a further four. In 24 patients mucosal abnormalities in the absence of a specific lesion were seen; in one of these, however, on histological and cytological examination of material obtained during endoscopy an early cancer was found. Endoscopic findings were completely normal in only 32 (40.5%) of the 79 patients studied. A comparison of the findings on barium-meal examination and endoscopy is shown in the table.

In the group of patients without "clinically significant" lesions at endoscopy cholecystography was later performed. Abnormalities were found in five patients, of whom three had gall stones and two a non-functioning gall bladder.

In conclusion, our experience emphasizes the importance of performing endoscopy on all dyspeptic patients with a negative result on barium-meal examination. When mucosal abnormalities are found the importance of obtaining biopsy and cytological material

cannot be over-emphasized. We undoubtedly disagree with the opinion of Dr. Barnes and his colleagues supported by Dr. C. F. Hawkins (23 November, p. 464), that mucosal abnormalities can be classified with normal findings. This opinion has been reinforced by the discovery of one case of early cancer in the group of patients which they would have classified on endoscopy as normal.

Finally, we would emphasize the importance of ensuring, as already recommended by the British Society for Digestive Endoscopy,<sup>2</sup> that in every district general hospital an endoscopy service should soon become available.—We are, etc.,

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<sup>1</sup> Porro, G. B., and Petrillo, M., *Lancet*, 1975, 1, 110.

<sup>2</sup> British Society for Digestive Endoscopy: *Memorandum on Further National Needs for Fibre-optic Endoscopy of the Gastro-intestinal Tract*. Chertsey, Surrey, B.S.D.E., 1973.

### Aspirin, Bile Salts, and Dioctyl Sodium Sulphosuccinate

SIR,—By measuring gastric transmucosal electrical potential differences Dr. K. M. Cochran and his colleagues (25 January, p. 183) have shown that both aspirin and taurocholic acid disrupt the gastric mucosal barrier in man; also that the mucosal damage is greater when both substances are present in the stomach together than with either alone. In support of their findings they quote the animal work of Semple and Russell,<sup>1</sup> which showed that aspirin and taurocholic acid administered orally together produce a significantly greater incidence of bleeding than aspirin alone.

Heaton<sup>2</sup> has postulated that the entero-hepatic circulation is designed to keep bile salts away from those parts of the digestive system where they may do harm, and there is now ample evidence that when bile salts appear in the stomach they damage the mucosal barrier. As Dr. Cochran and his colleagues point out, the mechanisms involved are not fully understood. Heaton<sup>3</sup> suggests that the surface activity of the bile salts makes the gastric mucosa permeable and, with the defences breached, it is the gastric acid which then does the damage. Taurocholic acid and acetylsalicylic acid could act in a similar manner.

The question now arises of possible mucosal damage resulting from the ingestion of synthetic surface active agents such as

sodium lauryl sulphate and, of more consequence, dioctyl sodium sulphosuccinate (DSS) which is contained in certain laxatives as a "stool softener." Since these laxatives are sometimes given in divided doses over prolonged periods there is a very real possibility of DSS and aspirin preparations appearing in the stomach together.

Taurocholic acid and DSS have certain physicochemical properties in common. Taurocholic acid is cholic acid conjugated with taurine, which is aminoethylsulphonic acid, and DSS is di(2-ethylhexyl) sodium sulphosuccinate; both are anionic detergents. In a recent pharmacological assessment of laxative agents<sup>4</sup> it was considered inconceivable that ingestion of detergents such as DSS could be without adverse effects on the structures and functions of the gastrointestinal tract. The evidence that DSS increases the toxicity of other drugs, including danthron and oxyphenisatin, was also noted.

In healthy subjects mucosal damage caused by reflux of bile from the duodenum is largely safeguarded against by the pylorus, but clearly there is no such physiological defence against detergents administered orally. It is suggested, therefore, that there is good reason to investigate the effects on the gastric mucosa of the oral administration of DSS, both alone and with aspirin.—I am, etc.,

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<sup>1</sup> Semple, P. F., and Russell, R. I., *Gastroenterology*. In press.

<sup>2</sup> Heaton, K. W., *Gut*, 1969, 10, 857.

<sup>3</sup> Heaton, K. W., *Bile Salts in Health and Disease*. Edinburgh, Churchill Livingstone, 1972.

<sup>4</sup> Jones, F. A., and Godding, E. W., Eds., *Management of Constipation*. Oxford, Blackwell, 1972.

### Treatment of Asthmatic Children with Steroids

SIR,—Your leading article (22 February, p. 413) states that in the prophylaxis of childhood asthma "in most cases 5 to 6 years is the lower limit for effective use of aerosol inhalers." This is not correct. It is quite easy to get most children from 2 years of age to use an inhaler and by this age asthma in the very young can be diagnosed with clinical certainty. As you suggest, disodium cromoglycate should be the initial drug of choice because it has been in use longer and is so free of side effects. Failure of response to this drug will warrant a change to a steroid inhalant and this change can be made quickly because they are easier for the child to take than disodium cromoglycate. With the early use of these two types of prophylaxis oral steroid prophylaxis with all its side effects should now no longer be necessary. A.C.T.H. prophylaxis is mainly of value in the older child with persisting asthma, and the numbers of these should diminish as the effects of early prophylaxis become apparent.—I am, etc.,

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SIR,—While your leading article (22 February, p. 413) gives a most helpful review of the drug treatment of asthma in children, it is nevertheless misleading. You state that where adequate bronchodilator

Comparison of findings on barium-meal examination with those on endoscopy in 79 patients with dyspepsia

Barium Meal Findings	Endoscopic Findings							Total
	Normal*	Hiatus Hernia	Benign Gastric Ulcer	Gastric Carcinoma	Duodenal Ulcer	Duodenal Scarring	Other Findings†	
Normal	51	2	1	2	3	2	2	63
Hiatus hernia	2	—	—	—	—	—	—	2
Benign gastric ulcer	1	—	1	—	—	—	—	2
Gastric carcinoma	—	—	—	—	6	—	—	6
Duodenal ulcer	2	—	—	—	—	—	—	2
Duodenal cap deformity	—	—	—	—	2	2	—	4
Total	56	2	2	2	11	4	2	79

\* Including mucosal abnormalities. † Including one duodenal polypoid lesion and one case of bezoar