

Editorial Committee

F. AVERY JONES (*Editor*)
NORMAN C. TANNER (*Assistant Editor*)
SHEILA SHERLOCK (*Assistant Editor*)

C. C. BOOTH
WILFRID CARD
RICHARD DOLL
R. A. GREGORY
HENRY T. HOWAT
THOMAS HUNT

ANDREW W. KAY
F. H. KEMP
J. E. LENNARD-JONES
B. C. MORSON
A. E. A. READ
E. N. ROWLANDS
GEOFFREY WATKINSON
R. B. WELBOURN
L. J. WITTS
A. W. WOODRUFF

EDITOR *British Medical Journal*

The object of *Gut* is to publish original papers and reviews concerned with practice and research in the field of gastroenterology. The field is that of alimentary, hepatic, or pancreatic disease, and papers may cover the medical, surgical, radiological, or historical aspects. They may also deal with the basic sciences concerned with the alimentary tract, including experimental work. The report of a single case will be accepted only if it is of sufficient interest in relation to a wider field of research.

There will be a section devoted to short papers on laboratory and surgical techniques and methods of investigation where these are not part of a lesser survey.

COMMUNICATIONS Papers should be addressed to the Editor, *Gut*, B.M.A. House, Tavistock Square, London, W.C.1. Papers are accepted only on the understanding that they are not published elsewhere without previous sanction of the Editorial Board. They should be in double-spaced typewriting on one side of the paper only. On the paper the name of the author should appear with initials (or distinguishing Christian name) only, and the name and address of the hospital or laboratory where the work was performed. A definition of the position held by each of the authors in the hospital or laboratory should be stated in a covering letter to the Editor. Communications should be kept short, and illustrations should be included when necessary; coloured illustrations are allowed only if monochrome will not satisfactorily demonstrate the condition. It is not desirable that results should be shown both as tables and graphs.

ILLUSTRATIONS Diagrams should be drawn in Indian ink on white paper, Bristol board, or blue-squared paper. The legends for illustrations should be typed on a separate sheet and numbered to conform with the relevant illustrations. Photographs and photomicrographs should be on glossy paper, unmounted. TABLES should not be included in the body of the text, but should be typed on a separate sheet.

ABBREVIATIONS In general, symbols and abbreviations should be those used by British Chemical and Physiological Abstracts. In any paper concerning electrolyte metabolism, it is desirable that data be calculated as m-equiv/l. as well as (or alternatively to) mg/100 ml.

REFERENCES These should be made by inserting the name of the author followed by year of publication in brackets. At the end of the paper, references should be arranged in alphabetical order of authors' names. Such references should give author's name, followed by initials and year of publication in brackets, the title of the article quoted, the name of the journal in which the article appeared, the volume number in arabic numerals, followed by the numbers of first and last pages of the article. Abbreviations are according to *World Medical Periodicals* (published by B.M.A. for World Medical Association), thus: Chandler, G. N., Cameron, A. D., Nunn, A. H., and Street, D. F. (1960). Early investigations of haematemesis. *Gut*, 1, 6-13.

REPRINTS Fifty reprints will be supplied free of charge. Further reprints will be available on payment of the necessary costs; an indication of the number of reprints required should be sent to the Publishing Manager on the form provided with the proofs.

NOTICE TO ADVERTISERS Application for advertisement space and for rates should be addressed to the Advertisement Manager, *GUT*, B.M.A. House, Tavistock Square, London, W.C.1.

NOTICE TO SUBSCRIBERS *GUT* is published monthly. The annual subscription rate is £8 8s. in the United Kingdom and the Republic of Ireland, and £9 5s. [\$22.00 U.S.A.] in all countries overseas. (Subscriptions at the 1968 bi-monthly rates, extending into 1969, will pay for six issues only. Subscribers will be informed when their current subscriptions expire.) Payment for overseas subscriptions should be made in sterling, i.e., £9 5s., and sent by Mail Transfer—Charges Remitter—through a Bank to the British Medical Association. Orders can also be placed locally with any leading subscription agent or bookseller. (For the convenience of readers in the U.S.A. subscription orders, with or without payment, can also be sent to: BRITISH MEDICAL JOURNAL, 80 Brighton Avenue, Boston, Mass. 02134. All inquiries, however, must be addressed to the Publisher in London.)

COPYRIGHT © 1969 by *GUT*. All rights of reproduction are reserved in respect of all papers, articles, tables, illustrations, etc., published in this Journal in all countries of the world.

GUT

The Journal of The British Society of Gastroenterology

BRITISH MEDICAL ASSOCIATION · TAVISTOCK SQUARE · LONDON WC1

Yearly Subscription (12 numbers): Inland £8 8s, abroad £9 5s, single number 17s. 6d.

Signposts

THE COELIAC AXIS AND ITS BRANCHES IN SPLENOMEGALY AND LIVER DISEASE (page 85) A study by selective angiography with special reference to the width of the coeliac axis which in cirrhosis is closely related to changes in the splenic artery.

EFFECT OF GASTRECTOMY ON BILIARY DYNAMICS (page 91) The normal relaxation of the sphincter of Oddi in relation to gastric peristalsis is disturbed after gastrectomy. Some degree of functional obstruction may then occur.

CARCINOMA OF BILE DUCTS IN HUSBAND AND WIFE (page 94) A marital case history of possible epidemiological significance.

AMYLOID IN THE GASTROINTESTINAL TRACT (page 98) Two patterns can be delineated pathogenically. In all cases amyloid was present in blood vessels, mainly in the submucosa. In the secondary amyloidoses and amyloidosis associated with familial Mediterranean fever, amyloid was deposited in the inner coat of small blood vessels, while parenchymal deposition of amyloid was predominantly in the mucosa. In primary amyloidosis and amyloidosis associated with multiple myeloma, amyloid was found in the outer coat of small and medium-sized blood vessels while parenchymal deposition was predominantly in the muscle layers.

PERMEABILITY CHARACTERISTICS OF THE CHOLERA-INFECTED SMALL INTESTINE (page 105) These important experimental studies have shown no evidence to indicate an absorptive defect but support the concept of increased intestinal permeability produced by the cholera vibrio.

MALIGNANCY AND ADULT COELIAC DISEASE (page 108) A case report showing that the jejunal atrophic mucosal changes which had returned to normal on a gluten-free regime did not relapse with the development of malignancy so long as a gluten-free diet was maintained.

THREE-DIMENSIONAL STRUCTURE OF THE RAT SMALL INTESTINAL MUCOSA DYNAMICS (page 112) A study after giving methotrexate which causes initial aplasia followed by increased cell production regeneration.

EXPERIMENTAL ISCHAEMIC COLITIS (page 121) A study in dogs demonstrating the effects of experimental devascularization of the colon and the similarities with human ischaemic colitis.

ISCHAEMIC COLITIS (page 131) An emergency barium enema may allow of an early diagnosis and this can be a great help in the management of such patients.

INHIBITION OF GASTRIC SECRETION IN MAN BY INTESTINAL FAT INFUSION (page 135) The instillation of fat into the duodenum and small intestine will produce at least 50% depression of the maximal level of gastric acid secretion. The responsible agent is probably humoral and appears to act at the parietal cell level.

INFLUENCE OF HYPERALDOSTERONISM UPON GASTRIC SECRETION (page 143) It is concluded that aldosterone probably does not influence acid and pepsin secretion in human or experimental hepatic cirrhosis either by a direct effect on the gastric mucosa or by depletion of body potassium.

CHOLEDOCHODUODENAL FISTULA IN NIGERIANS (page 146) Duodenal ulcer associated with gross scarring and adhesions around the duodenum is a commoner cause of internal biliary fistula than gall bladder disease. Duodenal stenosis is the commonest complication of duodenal ulcer in Nigerians.

GEOGRAPHICAL DISTRIBUTION OF STOMACH CANCER IN CZECHOSLOVAKIA (page 150) Further evidence of geographical variations in incidence within a country indicating the possible existence of environmental factors in aetiology. There was no apparent correlation with food habits, alcohol, or smoking.

ELECTRICAL STIMULATION TEST (page 155) The present position of this test, which measures the completeness of gastric vagotomy, is described.

MEASURING FORCES IN THE ANAL CANAL (page 160) A study using a recording device to measure forces acting simultaneously in the anal canal.

MOUNTING AND STORAGE OF GASTROCAMERA FILMS (page 164) Some excellent practical suggestions.

- evaluation of the mechanism of sphincter competence. *J. clin. Invest.*, **43**, 2272-2278.
- Phillips, S. F., and Edwards, D. A. W. (1965). Some aspects of anal continence and defaecation. *Gut*, **6**, 396-406.
- Porter, N. H. (1962). A physiological study of the pelvic floor in rectal prolapse. *Ann. roy. Coll. Surg.*, **31**, 379-404.
- Schuster, M. M., Hendrix, T. R., and Mendeloff, A. I. (1963). The internal anal sphincter response: manometric studies on its normal physiology, neural pathways, and alteration in bowel disorders. *J. clin. Invest.*, **42**, 196-207.
- Taverner, D., and Smiddy, F. G. (1959). An electromyographic study of the normal function of the external anal sphincter and pelvic diaphragm. *Dis. Colon Rect.*, **2**, 153-160.
- Wankling, W. J., Brown, B. H., Collins, C. D., and Duthie, H. L. (1968). Basal electrical activity in the anal canal in man. *Gut*, **9**, 457-460.

The January 1969 Issue

THE JANUARY 1969 ISSUE CONTAINS THE FOLLOWING PAPERS

Signposts

The economy of the columnar epithelial cell D. H. SMYTH

Three-dimensional structure of the human small intestinal mucosa in health and disease C. A. LOEHRY and B. CREAMER

Cell turnover in the rat small intestinal mucosa: An appraisal of cell loss C. A. LOEHRY, D. N. CROFT, A. K. SINGH, and B. CREAMER

Part I Cell loss in rats with a normal mucosa

Part II Cell loss in rats with an abnormal mucosa

Observations on the mechanism of abdominal pain D. J. HOLDSTOCK, J. J. MISIEWICZ, and SHEILA L. WALLER

Persorption of metallic iron particles G. VOLKHEIMER, F. H. SCHULTZ, A. LINDENAU, and U. BEITZ

Continuous intravenous pentagastrin as a stimulant of maximal gastric acid secretion M. C. MASON, G. R. GILES, and C. G. CLARK

Short-term study of the effect of human parietal cell antibody on the secretion of hydrochloric acid in rats RENE FIASSE,IRENA BRUS, CHARLES F. CODE, and GEORGE B. JERZY GLASS

Value of differential thermostability, urea inhibition, and gel filtration of alkaline phosphatase in the identification of disease states JAMES J. FENNELLY, MUIRIS X. FITZGERALD, and KEVIN MCGEENEY

Development of delayed hypersensitivity to dinitrochlorobenzene in patients with Crohn's disease J. VERRIER JONES, J. HOUSLEY, P. M. ASHURST, and C. F. HAWKINS

Serum immunoglobulins and lymphocyte transformation studies in coeliac disease T. E. BLECHER, A. BRZECHWA-AJDUKIEWICZ, C. F. MCCARTHY, and A. E. READ

Water and sodium absorption by the intestine in cholera A. H. G. LOVE

Importance of the size of the stoma in choledocho-duodenostomy A. G. JOHNSON and A. E. STEVENS

Reduction of gastric acid secretion on a low-salt diet and furosemide M. L. KOTHARI, J. C. DOSHI, H. G. DESAI, A. B. VAIDYA, U. K. SHETH, and J. M. MEHTA

Comment

Notes and activities

The Gastroenterological Society of Australia

Copies are still available and may be obtained from the PUBLISHING MANAGER,

BRITISH MEDICAL ASSOCIATION, TAVISTOCK SQUARE, W.C.1 price 17s. 6d.

Comment

ANTRAL FUNCTION AND VAGOTOMY

Since the publication of our paper 'Effect of vagotomy on the gastric secretion of acid chloride and pepsin in response to an antral stimulus and to insulin and maximal histamine stimulation' (F. I. Tovey, M. Swaminathan, K. Parker, and A. Daniell, *Gut*, 9, 659-666), investigations have further supported the suggestion there that 10% peptone and 3.5% sodium bicarbonate solutions give rise

to 'supramaximal' stimuli with a variable response to vagotomy in a series of 10 cases in which a weaker stimulus (100 ml of 7% alcohol) was used as the antral stimulus. All cases had a highly significant fall in acid and pepsin concentration and output but, again, no significant change in chloride concentration (Table). The results are very interesting in that they show a uniform depression of acid and pepsin, unlike the variable results obtained with peptone and sodium bicarbonate. This supports the suggestions that when the stimulus is 'supramaximal' vagotomy no longer has a uniform depressant effect.

F. I. TOVEY,
47 Hill Road,
Oakley, nr Basingstoke, Hants.

TABLE
EFFECT OF VAGOTOMY ON ANTRAL STIMULATION WITH 7% ALCOHOL

10 Cases	Secretory Rate (ml/min)	Total Acid		Chloride		Pepsin	
		Concentration (m-equiv/l)	Output (m-equiv/min)	Concentration (m-equiv/l)	Output (m-equiv/min)	Concentration (PU/min)	Output (PU/min)
Pre-vagotomy	6.11	76.7	0.45	139.4	0.84	2.97	17.64
SD	±1.52	±25.3	±0.14	± 17.8	±0.54	±0.89	±4.42
Post-vagotomy	3.21	26.2	0.08	161.9	0.51	1.77	5.27
SD	±0.97	±16.5	±0.05	±118.5	±0.29	±1.21	±0.53
t test P	< 0.01	< 0.01	< 0.01	> 0.50	< 0.02	< 0.05	< 0.01

Notes and activities

DR GEOFFREY WATKINSON, FRCP, has recently joined the new Gastrointestinal Centre of the Southern General Hospital, Glasgow, which is closely linked with the Medical and Surgical Professorial Units at the Western General Hospital. The objectives of this centre include the collection of data on important gastrointestinal disorders, a postgraduate training programme in gastroenterology, and clinical research in the laboratory built for the purpose. Dr Watkinson, Secretary of OMGE, will have the opportunity of further developing his great experience in follow-up and epidemiological studies in ulcer, colitis, and gallstones, in addition to clinical and laboratory work. This gastroenterological centre has been developed largely as a result of the efforts of Professor Andrew W. Kay and is likely to prove an important addition to British gastroenterology.

BOOKS *Atlas of Intestinal Stomas*, by Rupert B. Turnbull, Jr, and Frank L. Weakley. Illustrations by Robert M. Reed. This is a comprehensive and extremely well presented atlas relating to the surgical techniques and applications of ileostomy and colostomy. In addition, there is an admirable historical section. The 182 illustrations make their point with great clarity; they are

based on photographs taken at the time of operation and then projected on the screen of a viewer sited alongside the artist's drawing board. This has enabled unnecessary detail to be excluded and the emphasis concentrated on the technique under discussion. This is an atlas which has been prepared as a supplement for younger surgeons who have not had sufficient experience in this highly specialized field during their years of training, and is accompanied by a brief, but adequate, descriptive text. The experiences of English as well as American surgeons have been drawn upon and the atlas clearly represents an up-to-date and comprehensive study which should be available in every main surgical centre. (Henry Kimpton, London, 1973, 6d.)

'*Histochemistry, theoretical and applied*', Volume 1, by A. G. Everson Pearse (J. & A. Churchill, £6 10s.). This is the third edition which is now being subdivided into two volumes, the second one planned for 1970. With the rapid advance of immunochemistry and the role of mucopolysaccharides in the alimentary tract this encyclopaedic work will be much in demand by gastroenterologists.

'*Calorie deficiencies and protein deficiencies*'. Edited by R. A. McCance and E. M. Widdowson (J. & A. Churchill, £4.) With the growing appreciation of protein and calorie malnutrition in alimentary syndromes this report of a conference held in Cambridge in 1967 records a

milestone in our scientific progress. The main sections include marasmus and kwashiorkor, clinical aspects, pathology and metabolic patterns, treatment, the role of anaemias, vitamin deficiencies and toxins, calorie deficiencies, and protein deficiencies in experimental animals, ultimate prognosis in man and in animals. The full discussion is included and adds much of interest to this publication.

'Racial and geographical factors in tumour incidence.' Edited by A. A. Shivas. This is also the proceedings of a most interesting international conference on the epidemiology of cancer and relevant experimental work on animals. Edinburgh University Press, £3 3s.

The management of disorders of haemostasis is an occasional and difficult problem in patients with recurring alimentary bleeding, and attention is drawn to the recent publication *Treatment of hemorrhagic disorders*, edited by Oscar D. Ratnoff, price \$8.50, with contributions from 13 American specialists in this field and in addition a chapter by Dr Roger Hardisty, consultant haematologist at The Hospital for Sick Children, London, and also a section by Dr Charles Kerr, of the University of Sydney. The book covers the treatment of congenital and acquired haemorrhagic disorders and is a most practical publication.

This book, *Ulcerative colitis*, by J. C. Goligher, F. T. de Dombal, J. M. C. K. Watts, and G. Watkinson, with a contribution by B. C. Morson, provides a comprehensive statistical analysis of all aspects of ulcerative colitis and at the same time offers a most up-to-date and complete account of the clinical features and practical management, medical and surgical. It is an important contribution and will be particularly welcomed by all who are concerned in gastroenterological practice with teaching. Published by Baillière, Tindall and Cassell Ltd. Price £4 5s.

Liver biopsy interpretation by Peter J. Scheuer is a landmark in the integration of the pathology of liver diseases and clinical practice. Liver biopsy has become a common diagnostic procedure and this book brings together our present-day knowledge and will be equally welcomed by pathologists and by practising clinicians. The clarity of the illustrations is quite remarkable. It is an essential book for every departmental library. Published by Baillière, Tindall and Cassell Ltd. Price 85s. net.

Malabsorption syndromes is one of the monographs in the American 'Lectures in Living Chemistry' Series published by Charles C. Thomas, Springfield, Illinois, USA, and is written jointly by a physician and a surgeon. In only 165 pages they have given an admirable account of the physiological mechanisms and their disturbance concerning the absorption of fat, carbohydrates, protein, vitamins, and minerals. It is not just another 'scissors and paste' compilation but does reflect good clinical balance and judgment. Price \$7.50.

BRITISH COUNCIL COURSE The British Council has arranged a course (22 June - 5 July 1969) for medical practitioners from *overseas only* who wish to become further acquainted with recent advances in gastroenterology. There are places for 16 members and all information and applications must be received by the Director, Courses Department, The British Council,

2/3 Bloomsbury Square, London, WC1, by 1 March. The fee is £95, which includes the cost of bed, breakfast, and lunch. Members must make their own arrangements for dinner. The Director of Studies will be Dr Brian Creamer and the course is based on St. Thomas's Hospital, London.

A PRIZE FOR GASTROENTEROLOGISTS A prize of 15,000 Swiss francs is being offered by the Central Union of Swiss Milk Producers, Berne, to a scientist from any one of the following countries: Western Germany, Austria, Belgium, Denmark, Spain, Finland, France, Britain, Ireland, Italy, Kenya, Luxembourg, Norway, Netherlands, and Sweden. The subject for the 1969 prize is 'Intestinal absorption and malabsorption'. All workers in the fields of chemistry, medicine, and biology are eligible, and three copies of applications (containing a curriculum vitae, and reprints of three papers concerning the subject of the award published after 1960) should be sent to the President of the Jury, Professor M. Demole, Service de Dietétique, Hôpital Cantonal, CH-1211, Genève 4.

INTERNATIONAL CONFERENCES A '*Digestive Disease*' week will be held in Washington from Monday 12 May to Saturday 17 May at the Shoreham Hotel. The week is organized by the American Gastroenterological Association. On 12 and 13 May the programme will take the form of a postgraduate course in gastrointestinal endoscopy. In the evening of 13 May and the whole of 14 May the course will be concerned with the ileum, its function and malfunction. On 14 May the Annual Meeting of the American Society for Gastrointestinal Endoscopy will take place, and between 15 and 17 May the Annual Meeting of the American Gastroenterological Association. Enquiries about the course in gastrointestinal endoscopy should be addressed to Dr Vernon M. Smith, 301 St. Paul Place, Baltimore, Md. 21202, and for the course on the ileum to AGA Postgraduate Course, P.O. Box 190, McLean, Va. 22101.

A meeting of the *VIII Medical Days* and the *2nd Scientific Meeting of the Yugoslav Society of Gastroenterologists* will take place in Subotica, Yugoslavia, from 4 to 7 June 1969. The main subjects to be discussed at the meeting are chronic gastritis, chronic colitis and intestinal parasites, and the postcholecystectomy syndrome. There will also be time for free communications. All enquiries should be addressed to the Organizing Committee of the *VIII Medical Days*, Medical Department, General Hospital, Subotica, Yugoslavia.

The third *International Conference on Congenital Malformations* will be held from 8 to 13 September 1969 in the Netherlands at the Congress Centre, The Hague. On the first four days of the conference, symposia will be held during which different aspects of the subject will be treated by leading specialists. On Friday, the conference will divide into smaller groups in which it will be possible to go into more detail of the selected topics. On Saturday the conference assembles again in plenary session when information emerging from the conference will be summarized and evaluated. All information concerning this conference can be obtained from: c/o Holland Organizing Centre, 16 Lange Voorhout, The Hague, the Netherlands.

The *Second International Symposium on Gastrointestinal Motility* will take place in Rome from 10 to 14 September 1969. The aim of the reunion is to bring together those interested in the physiology and pathophysiology of the alimentary tract. Further information may be obtained from Dr Aldo Torsoli, c/o 2 Clinica Medica Dell' Universita, Viale Del Policlinico.

The *XI Pan American Conference of Gastroenterology* will be held in San Juan, Puerto Rico, from 26 October until 1 November 1969. The following topics will be discussed: Teaching in gastroenterology, intestinal absorption, gastric and oesophageal cancer, intestinal parasitism and microbiology, portal hypertension, schistosomiasis, and hepatocellular derangements. Further information may be obtained from the Secretary,

Dr Jose A. De Jesus, 1 Congreso Latino-Americano de Gastroenterologia, San Juan, Puerto Rico.

DANGERS OF KEEPING FIT He was aged 50, leading a very busy life helping the British export drive selling executive aeroplanes and determined to help his country and himself by keeping fit! His latest method was to undertake a series of most vigorous exercises specified for the young men joining the Canadian Air Force, but unhappily this had the effect of forcing his hiatus hernia progressively more and more and more above the diaphragm; after a particularly vigorous session he was seized by acute intestinal pain and inability to swallow as the result of torsion of his incarcerated hernia! He was successfully treated surgically and is now back selling aeroplanes!