

Postgraduate Medical Journal

Editor

A. A. G. LEWIS B.Sc. M.D. F.R.C.P.

Advisory Editorial Board

A. G. Apley F.R.C.S.	D. G. James M.A. M.D. F.R.C.P.
D. Barltrop B.Sc. M.D. M.R.C.P. D.C.H.	S. B. Karani D.P.H. F.R.C.P.
E. H. Brown D.M. M.R.C.P. D.C.H.	C. E. Newman C.B.E. M.D. F.R.C.P.
H. L. Cochrane F.R.C.S.	K. I. Nissen F.R.C.S.
J. O. Craig F.R.C.S.I. D.M.R.D. F.F.R.	J. W. Paulley M.D. F.R.C.P.
M. Davidson D.M. F.R.C.P.	N. E. Stidolph F.R.C.S.
H. Ellis M.A. D.M. F.R.C.S.	P. K. Thomas B.Sc. M.D. F.R.C.P.
J. P. Hopewell F.R.C.S.	

Editorial Representative for U.S.A.

D. Rabinowitz M.D. M.R.C.P. M.R.C.P.E.
Johns Hopkins University School of Medicine, Baltimore, Md

Editorial Representative for Australia

Sir Clive Fitts M.D.(MELB.) F.R.C.P.(LOND.) F.R.A.C.P.

Editorial Assistant

Mrs M. E. Coops B.Sc.

Postgraduate Medical Journal is published monthly for the Fellowship of Postgraduate Medicine by Blackwell Scientific Publications Ltd. The annual subscription is 63s (\$10.00) post free, and the price of single issues 10s 6d (\$1.75) postage extra. Orders for back issues published up to December 1966 and correspondence from Fellows and Associates should be sent to Mrs H. Seaman, Secretary, The Fellowship of Postgraduate Medicine, 9 Great James Street, London, W.C.1 (tel: CHAncery 6900); other orders and business correspondence should be addressed to Blackwell Scientific Publications Ltd, 5 Alfred Street, Oxford (tel: Oxford 40201).

All editorial correspondence should be addressed to Dr A. A. G. Lewis, The Postgraduate Medical Journal, 9 Great James Street, London, W.C.1 (tel: CHAncery 6900).

Advertisement enquiries and bookings should be addressed to S. & H. Fretwell Ltd, 267 Portland Road, London, S.E.25 (tel: ADDiscombe 8921/2).

The Fellowship of Postgraduate Medicine was founded by a group of London consultants after the First World War to assist postgraduates, particularly those coming to London from the Commonwealth, to pursue their studies. The Fellowship first published the *Postgraduate Medical*

Journal to give information about lectures, conferences and courses and to provide a monthly review of all branches of medicine.

Postgraduate Medical Journal publishes original papers on subjects of current clinical importance and welcomes review articles with extensive, up-to-date bibliographies as guides to further reading. Several symposia are published every year, each devoted to a single subject and written, by invitation, by specialists in different disciplines. Every issue includes authoritative Current Surveys of clinical problems, as well as well-documented Reports of cases of particular interest, Book Reviews and Postgraduate News.

A 'Notice to Contributors' is published on the inside back cover of this issue. The Editor reserves the right to make changes which may clarify or condense papers where this is considered desirable.

© The contents of this Journal are copyright and, subject to the provisions of Section 7 of the Copyright Act, 1956, they may not be copied, adapted or reproduced without permission. Requests for permission to reproduce material elsewhere, either in whole or in part, should be addressed to the Editor, Postgraduate Medical Journal, 9 Great James Street, London, W.C.1.

Books received

- Ganglion-blocking and Ganglion-stimulating Agents.* By D. A. KHARKEVICH. Pp. xi+367, illustrated. Oxford: Pergamon Press. 1967. 90s.
- Essentials of Otolaryngology.* By R. S. LEWIS, S. R. MAWSON, W. G. EDWARDS and H. LUDMAN. Pp. vii+380, illustrated. London: William Heinemann Medical Books. 1967. 55s.
- A View of the Brain.* By J. S. GRIFFITH. Oxford Science Research Papers No. 1. Pp. 79, illustrated. Oxford: Clarendon Press. 1967. 15s.
- Clinical Virology.* By R. H. A. SWAIN and T. C. DODDS. Pp. xii+318, illustrated. Edinburgh and London: E. & S. Livingstone. 1967. 75s.
- Ovarian Physiology.* By G. S. RICHARDSON. Pp. 167. New England Journal of Medicine Medical Progress Series.

- London: J. & A. Churchill. 1967. 50s.
- Communication in Science. Documentation and Automation.* Edited by A. DE REUCK and JULIE KNIGHT. Pp. xi+274. London: J. & A. Churchill. 1967. 60s.
- The Pharmaceutical Industry—a Personal Study.* By WYNDHAM DAVIES. Pp. 240. Oxford: Pergamon Press. 1967. 63s.

New Editions

- Beside Medicine.* By I. SNAPPER and A. I. KAHN. Second edition. Pp. xxvii+824. London: William Heinemann Medical Books. 1967. 140s.
- The Diabetic ABC. A Practical Book for Patients and Nurses.* By R. D. LAWRENCE. Fourteenth edition. Pp. 91. London: H. K. Lewis. 1967. 7s.

Book reviews

Children of Very Low Birth Weight

By ALISON McDONALD. Pp. 126. M.E.I.U. Research Monograph No. 1. London: William Heinemann Medical Books. 1967. 25s.

This is the first of a series of Research Monographs to be published by the Medical Education and Information Unit of the Spastics Society. It resembles in layout and presentation the 'Little Club Clinics' that emanate from the same stable. The purpose of the series is to provide specialist research workers with material that might otherwise have remained buried in a university thesis, and it is anticipated that not even all paediatricians will be attracted to this publication. With these provisos the readership will be élite indeed.

The substance of the book concerns a survey of some 1100 children who had weighed 4 lb (1800 g) or less at birth. The purpose of the study was to evaluate the physical and mental handicaps discovered when these children were between 6 and 8 years of age and to correlate them with the perinatal history. These children were contacted utilizing M.R.C. records assembled between 1951 and 1953 for another purpose and much effort must have been expended in tracing them so completely. The author indicates that it would have been necessary to screen 230,000 live births in order to assemble a comparable group. Children with abnormalities apparent to a Health Visitor were later examined in detail by psychologists and by one of a variety of doctors ranging from school medical officers to 'specialists.'

The findings, not unexpectedly, supported the contention of Little, 105 years ago, that cerebral palsy is associated with prematurity. A relationship between low birth weight and handicaps such as blindness and mental deficiency was also demonstrated. Perhaps the main virtues of the work are that it refers to British material and that, for the first time, numerical data derived from a large survey has been made available.

Two major defects exist, however, that cannot be overcome in spite of much statistical manipulation and computer assisted analysis. The first is the enormous number of observers that took part in so many centres which in itself brings problems in the interpretation of the data processed by them. More serious is the delay in publication which is 8 years after the observations were made and 16 years after the children were born. Thus such obsolete terminology as 'blue' and 'white' asphyxia is applied in the perinatal observations, surely inexcusable in 1967.

It is difficult to avoid the conclusion that a series of papers in a suitable journal would have served the author and the intended readers better than this type of publication.

The Uptake and Storage of Noradrenaline in Sympathetic Nerves

By L. I. IVERSEN. Pp. xiv+253, illustrated. London: Cambridge University Press. 1967. 57s. 6d.

This is an excellent monograph on recent advances in knowledge concerning catecholamine neurotransmitters. As indicated by the title, there is emphasis on the uptake mechanisms, particularly those aspects revealed by studies with tritiated noradrenaline. As this appears to be a unique method of inactivation for catecholamines, it is appropriate to deal with it in detail, especially as the author has himself done much work in this field.

There are a number of elegant hitherto unpublished photomicrographs including an electron microscopic autoradiograph. Evidence for and against the cholinergic link hypothesis is succinctly summarized. In addition to reviewing the peripheral role of noradrenaline, there is a good brief survey of evidence concerning catecholamine neurotransmitters in the central nervous system. A comprehensive bibliography is appended to each chapter.

Paediatric and Adolescent Gynecology

By H. W. JONES and R. H. HELLER. Pp. 333, illustrated. Baltimore: Williams and Wilkins. Edinburgh and London: E. & S. Livingstone. 1966. 72s.

Professor Jones, a gynaecologist, and Dr Heller, a paediatrician, have written an account of this subject which will serve as a reference for many years. The first two parts are a description of the embryological development of the reproductive tract, and the anatomical and physiological considerations in infancy and childhood. This section accounts for about one-sixth of the book and provides a foundation for the pathology. The remainder of the book is in four sections; anomalies, tumours, infections, and endocrine disorders.

The diseases described are not commonly met by any single gynaecologist. The authors have described each syndrome with lucidity; apart from the clinical picture, details of diagnostic procedures and treatment are given. The accounts are supported by their own cases and those culled from the literature. Their own cases are displayed in excellent photographs. It is these features which make the book a worthwhile reference.

The senior author is an expert on endocrine disorders and this section is of particular interest. He makes a plea for early recognition of sex in infancy so that the child may be reared in the same sex as it will bear in adult life. Paediatrician, obstetrician, and midwife have the responsibility of assigning the sex of a newborn child; all will have something to learn from Professor Jones' wide experience.

Postgraduate news

FELLOWSHIP OF POSTGRADUATE MEDICINE

The Fellowship usually holds the following courses each year (approximate dates and times in parentheses):

Medicine (M.R.C.P.)

General Medicine. Connaught, London Chest, Whips Cross Hospitals (four weeks, twice yearly, April/May, October/November), St Stephen's Hospital (evenings, four weeks, twice yearly), Whittington Hospital (evenings, five weeks, twice yearly, May/June, October/November). Queen Mary's Hospital for the East End (weekend, twice yearly, June, December). Ashford Hospital, Middlesex (two Saturdays, twice yearly, May, November).

Infectious Diseases. Hither Green Hospital (weekend, twice yearly, March/November).

Paediatrics (D.C.H.). Princess Louise Kensington Hospital (weekend, twice yearly, March, September/October).

Surgery (F.R.C.S.)

General Surgery. Connaught Hospital (weekend, twice yearly, April, September/October). Queen Mary's Hospital for the East End (weekend, once yearly, February). Royal Marsden Hospital (twice yearly, March, September).

General Surgery and Orthopaedics. Fulham Hospital (three weeks, evenings, twice yearly, March/April, September/October).

Orthopaedics. Rowley Bristow Hospital, Pyrford (three alternate weekends, twice yearly, March/April, September/October).

Plastic Surgery. Queen Mary's Hospital, Roehampton (weekend, twice yearly, February, September).

Clinical Attachments. A limited number of clinical attachments in General Medicine will be available shortly at Bethnal Green Hospital for periods of up to 2 months, fee 4 guineas per week. Further details available from the secretary.

Current Courses

General Medicine (M.R.C.P.). Ashford Hospital. Saturdays 18 and 25 November. Fee £5 5s.

General Medicine (M.R.C.P.). Queen Mary's Hospital for the East End. 9, 10 December. Fee £4 4s.

Please note that instruction arranged by the Fellowship of Postgraduate Medicine is open only to Associates (annual subscription, 21s). Detailed syllabuses are published approximately 4-6 weeks before courses begin and are circulated to all Associates. No entries to courses can be accepted in advance of the syllabus being published.

Information regarding courses can be obtained from the office between 10 a.m. and 5 p.m., Mondays to Fridays (Telephone 242-6900), or by writing to the Secretary, Fellowship of Postgraduate Medicine, 9 Great James Street, London, W.C.1.

THE COMMONWEALTH AND INTERNATIONAL MEDICAL ADVISORY BUREAUX

The Bureaux are maintained by the British Medical Association to provide a personal advisory service to doctors visiting the United Kingdom from all parts of the world. General information, as well as that on postgraduate education and accommodation is given.

All enquiries should be addressed to the Medical Director, Commonwealth and International Medical Advisory Bureaux, British Medical Association, Tavistock Square, London, W.C.1.

CAMBRIDGE

Cambridge University Postgraduate Medical School

A summary of postgraduate facilities available at Addenbrooke's Hospital from October to July can be obtained from the Secretary of the Medical School, Tennis Court Road, Cambridge. Arrangements can be made for practitioners to attend the practice of the Teaching Hospital Group for short or long periods.

Postgraduate Courses

Cambridge

The annual course on the 'Biology of Skin' will be held from 11 to 16 December 1967. Courses in 'Geriatrics' will be held from 18 to 22 March 1968, and in 'Paediatrics' on 8, 9 and 10 April 1968. The third course on 'Progress in the Biological Sciences in relation to Dermatology' will be held from 23 to 28 September 1968. Accommodation will be provided in Colleges of the University for each of these courses.

An advanced medicine course is held on Tuesdays at 2.15 p.m. intended primarily for M.R.C.P. candidates, but open to all who are interested. Surgical tutorials are held on Saturday mornings during term.

Two 1-week refresher courses for General Practitioners will be held from 1-6 July and 8-13 July 1968, accommodation for which will be available in Downing College. One-day symposia on subjects of interest to general practitioners are held at 3-4 week intervals throughout the academic year; Saturday 11 November Haematology, Sunday 19 November Cardio-vascular and Respiratory Conditions (at Papworth), Saturday 25 November Neurology and Neurological Surgery, Saturday 9th December Geriatrics (at Chesterton Hospital).

The Thursday Lunch Club, attended by hospital staff as well as general practitioners, meets at Addenbrooke's Hospital on the first and third Thursdays each month. A buffet lunch is served from 12.30 to 1.15 p.m. followed from 1.15 to 2.15 p.m. by a discussion or case-conference.

Ipswich

At the Anglesea Road Wing, East Suffolk and Ipswich Hospital, Clinical Society Meetings will be held on the second Wednesday of the month at 8.30 p.m. from November to May (except in December). 'Friday Club' Discussion Groups for General Practitioners take place on the first and third Fridays each month from 15 September until 19 July between 1.45 and 2.45 p.m., preceded by buffet lunch at 1 p.m. Half-day symposia will be held on 1 December and 1 March 1.45-5.0 p.m. Introductory Course in Family Psychiatry 1-5 April 1968.

Bury St. Edmunds

Clinical Meetings, Clinico-Pathological Conferences, and Scientific Tea Meetings are held regularly at the West Suffolk Hospital. Lunch-time forums, preceded by buffet luncheon 12.30-1.15 p.m., are held on alternate first Tuesdays¹(5

September) and Fridays (6 October) throughout the year. Teaching ward-rounds, a resident obstetric course, and other postgraduate classes, demonstrations and journal club meetings are available. A 1-day symposium on 'Early Diagnosis in General Practice' will be held on Sunday 8 October. Detailed time-tables are available from the Clinical Tutor.

Norfolk and Norwich

Detailed time-tables of the clinical meetings, courses and other educational arrangements may be obtained from the Clinical Tutor, Norfolk and Norwich Institute for Medical Education, Norfolk and Norwich Hospital.

Ely

Half-day ward-rounds and Colloquia for general practitioners are held at the R.A.F. Hospital, Ely at 10.30 a.m. on Sundays 12 November, 10 December, 11 February, 10 March and 12 May.

King's Lynn

A 1-day symposium on 'Practical Aspects of Abortion Law Reform' will be held on Sunday 3 December.

Peterborough

Lunch-time Clinical Meetings are held on the first and third Tuesdays in the month at the Peterborough Memorial Hospital.

WEST MIDDLESEX HOSPITAL

Postgraduate Medical Lectures—October/December 1967

November 15: Primary, Secondary and Tertiary Hyperparathyroidism: Professor C. E. Dent.

November 22: Dementia as a Presenting Symptom: Dr John Marshall, Institute of Neurology.

November 29: Disturbances of Carbohydrate Absorption in Man: Dr A. M. Dawson, St Bartholomew's Hospital.

December 6: Drugs, Poisons and the Kidney: Professor M. D. Milne, Westminster Hospital.

Wednesday 5 p.m. in Lecture Theatre, West Middlesex Hospital, Isleworth, Middlesex. Tea and biscuits 4.45 p.m. General practitioners, consultants, registrars and house officers are cordially invited.

LIVERPOOL

University of Liverpool. Full-time courses are held in Surgery, Orthopaedic Surgery, Radio-diagnosis, Radiotherapy, Public Health, Tropical Medicine and Hygiene, Anaesthesia and Venereology.

Part-time courses are held in Medicine, Psychological Medicine, Oto-Rhino-Laryngology, Child Health, Obstetrics and Gynaecology.

After fulfilling the regulations, candidates may become eligible to take the degrees of Ch.M., M.Ch.Orth., and M.Ch.Otol., and the Liverpool Diplomas, D.P.H., D.P.M., D.T.M. & H., D.M.R.(D) or D.M.R.(T.).

The other courses are designed for students working for the London Diplomas.

Further information may be obtained from the Heads of the appropriate departments of The University, Liverpool 3.

OXFORD

University of Oxford. Enquiries about research and specialist training attachments may be addressed to the head of the relevant clinical or laboratory department in one of the teaching hospitals (United Oxford Hospitals, Nuffield

Orthopaedic Centre, Warneford and Littlemore Hospitals) or to the Director of Postgraduate Medical Studies. Enquiries about study days and weekly classes at Oxford for M.R.C.P., F.R.C.S., M.R.C.O.G., F.F.A., D.P.M., D.M.R. candidates from the Oxford region, general practitioner refresher courses, resident obstetric and other clinical attachments, to the Director of Postgraduate Medical Studies, Osler House, 43 Woodstock Road, Oxford, from whom also information about the Medical Centres at Aylesbury, Kettering, Northampton, Reading, Swindon and Wycombe may be obtained.

GLASGOW

Surgery. An intensive course of instruction in the basic sciences suitable for candidates preparing for the Primary Fellowship Examination in Surgery is held from October to December. A modified form of the course is available for candidates preparing for the D.A. or F.F.A. examinations. Fee £30.

Surgery. A short course intended to review certain developments in surgery is held in March. The course is suitable for candidates preparing for final Surgical Fellowship examinations or as a refresher course for established surgeons. Fee £15 15s.

Anaesthetics. A course for specialist anaesthetists and for those preparing for the final part of the F.F.A.R.C.S. will be held in May. Fee £10 10s.

Medicine. An intensive course on Recent Advances in Clinical Medicine suitable for candidates preparing for the Membership Examination is held twice annually for a fortnight in March and September. Fee £15 15s.

Geriatrics. A course for trainee specialists in Geriatric Medicine or General Practitioners in charge of geriatric beds in hospitals is held in May. Fee £5 5s.

Child Health. A formal course held in May and November for those preparing for the D.C.H. and M.R.C.P. with Child Health as a special subject. Fee £15 15s.

Obstetrics. An intensive week's course of instruction in obstetrics for those preparing for the D.Obst.R.C.O.G. held in September. Fee £7 10s.

Mental Deficiency. An intensive course in Mental Deficiency is held for 3 weeks in October. The course includes lectures and demonstrations in mental handicap and deficiency, instruction in mental testing and visits to institutions. Fee £18.

Introduction to Psychiatry. An intensive course providing a general introduction to psychiatry is held for 3 weeks in November. The course includes theoretical and clinical instruction in child psychiatry and psychology and adult psychiatry. It is particularly suitable for medical officers concerned with public health. Fee £18.

Psychological Medicine. A course for clinicians and trainee psychiatrists preparing for the D.P.M. Part I is held from January to March. Fee £20.

Steroid Endocrinology. A course for clinicians and hospital laboratory workers with special interest in Endocrinology and for those in general medicine who wish to have a better understanding of treatment with steroid hormones is held in September. Fee £15.

Diagnostic Virology. A course for experienced laboratory workers who wish to develop diagnostic virology for epidemiological purposes in this country and abroad is held in March. Fee £25.

Histopathology of the Skin. A course for pathologists and those with some training in pathology is held for 1 week in March. Fee £7 10s.

Forensic Medicine. A postgraduate course in the University Department of Forensic Medicine is held for 10 weeks from April to June. Fee £15.

Clinical Attachments. A scheme for clinical attachments in general medicine, general surgery and various specialities has been arranged to assist those working for higher qualifications. An attachment may be started at any time. No formal instruction is given, but participants can gain intensive clinical experience by following the day-to-day work of a unit in a Glasgow teaching hospital. Fee £5 per month. Registration Fee £1 1s.

Teaching Ward Rounds. Each academic term a course of ten teaching ward rounds in Medicine is arranged. These occupy one afternoon a week. Fee £8 8s.

Radiology. A course in radiological interpretation for clinicians. Lecture demonstrations on alternate Tuesdays in conjunction with Teaching Ward Rounds. Fee £5 5s.

GENERAL PRACTITIONER COURSES

Two Refresher Courses for general practitioners are held annually – for a fortnight in May and a week in September. Two-week postgraduate residencies are available continuously in maternity hospitals in the Western Region.

Clinical Attachments – continuous. Full-time or part-time attachments to hospital teaching units to enable General Practitioners to increase their experience and keep up to date with recent trends and advances. Fee £1 5s. per week for full-time attachment.

Extended Courses and 1-day course covering selected topics in general subjects or the specialties held in teaching hospitals in Glasgow and principal hospitals in other parts of the Western Region. Meetings are generally held on Sundays from October to May and are arranged by the West of Scotland Faculty of the College of General Practitioners from whom full details are available.

Full-time Course. The Board offers full-time postgraduate courses in Radiology (2 years) and Radiotherapy (2 years). The University offers full-time postgraduate courses leading to the following diplomas:

- Diploma in Public Health (1 year)
- Diploma in Clinical Psychology (2 years).

Conferences. Specialist conferences on various topics are held twice a year in the Hall of the Royal College of Physicians and Surgeons. In these, invited guests and local speakers discuss current topics and time is provided for audience participation. These conferences are designed particularly for consultants and registrars.

Further information and application forms can be obtained from the Director of Postgraduate Medical Education, The University, Glasgow, W.2.

NEWCASTLE UPON TYNE

Courses of three to four sessions in various Medical and Surgical subjects on a weekly sessional basis during term-time. Suitable for those preparing for a higher qualification. Clinical attachments, full-time or part-time, throughout the year. £5 per month.

Attachments of 1 or 2 weeks for general practitioners in General Medicine, Dermatology, Obstetrics, Paediatrics, Psychiatry, Geriatrics and other subjects by arrangement. Recognized under Section 48 of the N.H.S. Act.

Further details from the Postgraduate Sub-Dean, Organization for Postgraduate Medical Education, The Medical School, The University, Newcastle upon Tyne.

University courses for postgraduate diplomas. D.P.M. and D.P.H. *Further details from the Assistant Registrar, Medical School, The University, Newcastle upon Tyne.*

THE ROYAL COLLEGE OF GENERAL PRACTITIONERS

Medical Recording Service

Kitts Croft, Writtle, Chelmsford, Essex. (Tel. Writtle 316) Selection of titles available on tape (5 in reels running at 3½ ips). These talks may be borrowed by any doctor anywhere in the world.

- 67-17 Haemoglobin—Dr Herman Lehmann
37 min. 22 slides (Basic Medicine Series)
- 67-20 The Control of Typhoid Fever—Dr Ian Taylor
38 min.
- 67-22 Solitary Nodules in the Thyroid Gland—Dr H. B. Young
17 min.
- 67-23 Medical Negligence—Dr J. Leahy Taylor
37 min.
- 67-24 Glomerulonephritis—Dr J. S. Cameron
70 min. (in two parts) 31 slides
- 67-25 Myeloproliferative Diseases—Dr S. M. Lewis
30 min. 29 slides (From Royal Postgraduate Medical School)
- 67-32 Children and Death—Dr Simon Yudkin
40 min.

Postgraduate Medical Journal: Notice to Contributors

Typescripts (two complete copies) should be sent to the Editor, Dr A. A. G. Lewis, Postgraduate Medical Journal, 9 Great James Street, London, W.C.1. Papers should be typewritten on one side of the paper only, with a 1½ inch margin, and the lines should be double-spaced. In addition to the title of the paper there should be a 'running title' (for page headings) of not more than 45 letters (including spaces). The paper should bear the name of the author(s) with their degrees and descriptions and of the laboratory or research institute where the work has been carried out. The full postal address of the principal author should be given as a footnote. (The proofs will be sent to this author and address unless otherwise indicated).

Arrangement. Papers should normally be divided into: (a) Introduction; (b) Materials and methods; (c) Results, as concise as possible (both tables and figures illustrating the same data will rarely be permitted); (d) Discussion and conclusions; (e) Summary, brief, self-contained and embodying the main conclusions; (f) Acknowledgments; (g) References.

References. Only papers closely related to the author's work should be included; exhaustive lists should be avoided. References should be made by giving the author's surname, with the year of publication in parentheses. When reference is made to a work by three authors all names should be given when cited for the first time, and thereafter only the first name, adding *et al.*, e.g. Smith *et al.* (1958). The '*et al.*' form should always be used for works by four or more authors. If several papers by the same author and from the same year are cited, a, b, c, etc., should be put after the year of publication, e.g. Smith *et al.* (1958a). All references should be brought together at the end of the paper in alphabetical order. References to articles and papers should mention (a) names(s) of the author(s); (b) year of publication in parentheses; (c) title of paper; (d) title of journal, underlined, abbreviated according to *World Medical Periodicals* (3rd edn, World Medical Association); (e) volume number; number of first page of article. References to books and monographs should include (a) name(s) and initials of author(s) or editor(s); year of publication in parentheses; (b) title, underlined; (c) edition; (d) page referred to; (e) publisher; (f) place.

Standard usage. The *Concise Oxford English Dictionary* is used as a reference for all spelling and hyphenation. Verbs which contain the suffix *ize* (*ise*) and their derivatives should be spelt with the *z*. Statistics and measurements should always be given in figures, i.e. 10 min, 20 hr, 5 ml, except where the number begins the sentence. When the number does *not* refer to a unit of measurement, it is spelt out

except where the number is greater than one hundred.

Abbreviations. Abbreviations for some of the commoner units are given below. The abbreviation for the plural of a unit is the same as that for the singular unless confusion is likely to arise.

gram(s)	g	second(s)	sec
kilogram(s)	kg	cubic millimetre(s)	mm ³
milligram(s)		millimetre(s)	mm
(10 ⁻³ g)	mg	centimetre(s)	cm
microgram(s)		millicurie(s)	mCi
(10 ⁻⁶ g)	μg	millilitre(s)	ml
nanogram(s)		pound(s)	lb
(10 ⁻⁹ g)	ng	milliequivalent	mEq
picogram(s)			
(10 ⁻¹² g)	pg	R _F values	R _F
hour(s)	hr		
minute(s)	min	gravitational acceleration	g
		micron(s)	μ
		per cent	%

Example: mg/100 ml, for biochemical values; mEq/l.

Figures. In the text these should be given Arabic numbers, e.g. Fig. 3. They should be marked on the backs with the name(s) of the author(s) and the title of the paper. Where there is any possible doubt as to the orientation of a figure the top should be marked with an arrow. Each figure must bear a reference corresponding to a similar number in the text. Photographs and photomicrographs should be unmounted glossy prints and should not be retouched. Line diagrams should be on separate sheets; they should be drawn with black Indian ink on white paper and should be about four times the area of the final reproduction. Lines and lettering should be of sufficient thickness and size to stand reduction to one-half or one-third. Letters and numbers must be written lightly in pencil. Whenever possible, the originals of line diagrams, prepared as described above, should be submitted and not photographs. The legends of all the figures should be typed together on a single sheet of paper headed 'Legends to Figures.'

Tables. There should be as few tables as possible and these should include only essential data; the data should not be crowded together. The main heading should be in capitals with an Arabic number, e.g. TABLE 2. Each table must have a caption in small letters. Vertical lines should not be used.

Page proofs will be submitted to the contributors for minor corrections and should be returned to the Editor within 3 days. Major alterations to the text cannot be accepted.

Offprints. These may be purchased if ordered on the form which will be sent to the senior author with the proofs.