

Postgraduate Medical Journal

Editor

IAN GILLILAND M.D. F.R.C.P.

Assistant Editor

B. I. HOFFBRAND M.A. D.M. M.R.C.P.

Advisory Editorial Board

A. G. Apley F.R.C.S.
D. Barltrop B.Sc. M.D. F.R.C.P. D.C.H.
E. M. M. Besterman M.A. M.D. F.R.C.P.
A. M. Breckenridge B.Sc. M.R.C.P.
E. H. Brown D.M. F.R.C.P. D.C.H.
A. E. R. Buckle F.R.C.S. F.R.C.O.G.
J. O. Craig F.R.C.S.I. D.M.R.D. F.F.R.
A. H. Crisp M.D. M.R.C.P. F.R.C.P.Ed. F.R.C.Psych.
D.P.M.
Sir Robert Drew K.C.B. C.B.E. E.R.C.P. F.R.A.C.P.
R. Eban M.A. M.R.C.P. F.F.R.
H. Ellis M.A. D.M. F.R.C.S.
R. Goulding B.Sc. M.D. F.R.C.P.

J. P. Hopewell F.R.C.S.
D. G. James M.A. M.D. F.R.C.P.
S. B. Karani D.P.H. F.R.C.P. F.A.C.C.P.
R. S. Kocen T.D. F.R.C.P.
D. M. Krikler M.D. F.R.C.P. F.R.C.P.Ed. F.A.C.C.
B. Lewis Ph.D. M.D. F.R.C.P. M.R.C.Path.
C. E. Newman C.B.E. M.D. F.R.C.P.
K. I. Nissen F.R.C.S.
J. W. Paulley M.D. F.R.C.P.
T. A. J. Pranker M.D. F.R.C.P.
D. A. Pyke M.D. F.R.C.P.
J. H. Swallow M.D. F.R.C.P.
P. Turner B.Sc. M.D. F.R.C.P.

Editorial Representative for Australia

Professor Thomas Stapleton M.A. D.M. M.R.C.P. D.C.H.

Editorial Assistants

Mrs J. M. Coops B.Sc. & Mrs L. Edmondston-Low

Postgraduate Medical Journal is published monthly for the Fellowship of Postgraduate Medicine by Blackwell Scientific Publications Ltd. The annual subscription is £16.00 (\$54.00) post free, and the price of single issues £1.50 (\$5.00) postage extra. If payments are made by bank transfer, all charges shall be at the remitter's expense. Orders and business correspondence should be addressed to Blackwell Scientific Publications Ltd, Osney Mead, Oxford OX2 0EL (tel: Oxford 40201).

All editorial correspondence should be addressed to The Editor, The Postgraduate Medical Journal, Chandos House, 2 Queen Anne Street, London W1M 9LE.

Advertisement enquiries and bookings should be addressed to Blackwell Scientific Publications Ltd, Osney Mead, Oxford OX2 0EL.

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. Most issues include authoritative Current Surveys of clinical problems, as well as well documented Reports of cases of particular interest, Correspondence and Book Reviews.

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, Chandos House, 2 Queen Anne Street, London W1M 9LE. This Journal is covered by *Current Contents* and *Biological Abstracts*.

Cardiac biopsy in cardiomyopathy

Ciba Foundation Guest Meeting (in co-operation with the International Society of Cardiology Council on Cardiomyopathies) held at Ciba Foundation, Portland Place, London, on Monday 1st October 1973

Editors: CELIA M. OAKLEY AND E. G. J. OLSEN

CONTENTS

Introduction CELIA M. OAKLEY AND E. G. J. OLSEN	269
SESSION I	
<i>Chairman:</i> WALLACE BRIGDEN	
The relation between function and causation in cardiomyopathy CELIA M. OAKLEY	271
Pathological recognition of cardiomyopathy E. G. J. OLSEN	277
Technique of endomyocardial biopsy—including a description of a new form of endomyocardial biptome P. J. RICHARDSON	282
Transvenous endomyocardial biopsy—application of a method for diagnosing heart disease PHILIP CAVES, JOHN COLTART, MARGARET BILLINGHAM, ALAN RIDER AND EDWARD STINSON	286
Problems of myocardial biopsy D. HARMJANZ	291
<i>Discussion</i>	293
SESSION II	
<i>Chairman:</i> WALTER SOMERVILLE	
Introduction CELIA M. OAKLEY AND WALTER SOMERVILLE	294
Results of endomyocardial biopsy—histological, histochemical and ultrastructural analysis E. G. J. OLSEN	295
Biochemical studies on biopsies from normal and diseased cardiac tissue (Abstract) T. J. PETERS, F. J. BLOOMFIELD AND C. M. OAKLEY	298
The effects of hyperosmolal coronary perfusion on the haemodynamic, metabolic and ultrastructural changes of myocardial anoxia NORMAN BRACHFELD, JAMES CHRISTODOULOU, ROBERT ERLANDSON AND CHARLES SMITHEEN	299
<i>Discussion</i>	308

SESSION III

Chairman: WATER ABELMANN

The coronary arteries in active viral cardiomyopathies G. E. BURCH	311
Effect of ethanol infusion on the ultrastructure of human myocardium H. KLEIN AND D. HARMJANZ	325
Distribution of digoxin in the human heart D. JOHN COLTART, HANS GEORGE GÜLLNER, MARGARET BILLINGHAM, ROBERT H. GOLDMAN, EDWARD B. STINSON, SUMNER M. KALMAN AND DONALD C. HARRISON	330
New approach in studying cardiac muscle cell injury G. RONA, M. BOUTET AND I. HÜTTNER	334
<i>Discussion</i>	340

SESSION IV

Chairman: PROFESSOR JOHN GOODWIN

Introduction JOHN GOODWIN	343
The cardiomyopathy associated with methylsalicylate HILLARY P. OJIAMBO	344
The plasma membrane in cardiomyopathy WINIFRED G. NAYLER AND W. BURIAN	350
<i>Discussion</i>	356
<i>Summing up</i> WALTER H. ABELMANN	357

Books received

Food and Nutrition Research. Report of the ARC/MRC committee. Pp. xv+211, soft cover. H.M.S.O., London; Elsevier Scientific Publishing Company, Amsterdam, New York, 1974. £3.80.

Prenatal Diagnosis and Selective Abortion. (The Rock Carling Monograph, 1974). By HARRY HARRIS. Pp. 101, hard cover. The Nuffield Provincial Hospitals Trust, 1974. £1.75.

Surgery for Students of Nursing. By CAIRNEY AND CAIRNEY. Sixth edition. Edited and revised by Eric M. Nanson and Richard Orgias. Pp. 494, illustrated, hard cover. N. M. Peryer Limited, New Zealand, 1974. NZ \$8.00.

Infectious Diseases. Epidemiology and Clinical Practice. By A. B. CHRISTIE. Second edition. Pp. xiv+1095, hard cover, illustrated. Churchill, Livingstone, Edinburgh, London & New York, 1974. £12.50.

Infection with Non-sporing Anaerobic Bacteria. A Symposium of the British Society for Antimicrobial Chemotherapy held at the Royal College of Physicians, London. February 1974. Ed. by IAN PHILLIPS AND MAX SUSSMAN. Pp. xii+234, hard cover, illustrated. Churchill, Livingstone, Edinburgh, London & New York, 1974. £6.00.

Screening in General Practice. Ed. by C. R. HART. Pp. 338, soft cover illustrated. Churchill, Livingstone, Edinburgh, London & New York, 1975. £5.00.

Book reviews

Heart Disease and Pregnancy.

By PAUL SZEKELY AND LINTON SNAITH. Pp. iv+217, illustrated, hard cover. Edinburgh: Churchill Livingstone, 1974. £7.00.

This important book arises from the extensive personal experience of the authors, one a cardiologist and the other an obstetrician, who have managed over a thousand patients with various cardiovascular disorders between 1942 and 1971. The book is intended mainly for readers at postgraduate level and I am sure that it will be of particular value to all obstetricians and also to many physicians. The close liaison established at Newcastle General Hospital between the cardiologist and the obstetrician with the formation of a cardiac ante-natal clinic has resulted in an accumulation of a large amount of knowledge which inevitably has been of mutual benefit. The knowledge and experience gained by the authors has been compiled into a book which should be of value both for basic reading and for reference purposes. Each chapter is followed by a very satisfactory list of references.

The first chapter of the book, on circulatory dynamics in pregnancy, reviews the changes that take place in the maternal circulation during pregnancy, and finally dispels the erroneous impression that the cardiac output falls in the last 8 weeks of pregnancy. The changing circulatory dynamics in the puerperium are described, and throughout the book the authors emphasize that the puerperium is a particularly dangerous and often neglected part of the total care of the patient.

The authors have devoted over half the book to rheumatic heart disease, since it is still the most frequently encountered heart disease in pregnancy. A brief general review of the nature of rheumatic fever is initially presented. The evolution and preventative aspects of rheumatic heart disease are considered in the context of their relationship to problems occurring later in the childbearing age and in pregnancy. The chapters devoted to rheumatic heart disease in pregnancy are very comprehensive indeed and particularly impressive are the chest radiographs and electrocardiograms. It is unfortunate that the authors are occasionally inconsistent in their use of terminology. For instance the pathophysiology of pulmonary oedema in mitral stenosis is discussed in some detail and they emphasize that the major factor is a mechani-

cal obstruction rather than a myocardial problem; they then immediately state '23% of the pregnancies occurring in patients with pure mitral stenosis were complicated by heart failure . . .'. In fact, only 2% had right heart failure and the remainder had pulmonary congestion or pulmonary oedema.

The section on anticoagulants in pregnancy reviews a very difficult area succinctly and accurately. However, the section on infective endocarditis is rather confusing and the terminology again inconsistent. It is unfortunately implied that fascia lata valves have advantage over other types of valve; this is now known to be erroneous and the surgeons quoted are no longer using these valves because of their subsequent problems. The authors suggest that antibiotic therapy to cover delivery is mandatory, which perhaps presents a point of view rather too vehemently and is certainly not a unanimous opinion. The place of 'cardiovalvar surgery' in pregnancy, complicated by rheumatic heart disease, is very clearly presented. Drawing both on their own experience and that of others, the authors give a very balanced and helpful account of the present indications for both closed valvotomy and open heart surgery.

The remainder of the book is devoted to congenital heart disease, cardiomyopathies, coronary artery disease, pericardial disease and diseases of the aorta. The experience of the authors is more limited but, nevertheless, with good use of the available literature they are able to present a very satisfactory account of the problems.

With the authors' large experience it would have been useful to have a section on the cardiac indications for termination of pregnancy and the risks associated with the termination. However, the criticisms are relatively minor and I am sure that this book should be on the shelf in every obstetric department, and it will also serve the physician in good stead.

Occupational Lung Disorders

By W. RAYMOND PARKES. Pp. 528+ xv, illustrated. London: Butterworth & Co., 1974. £15.00.

The appearance of this book has filled a gap in the field of chest diseases which has long been apparent. There is

Postgraduate Medical Journal: Notice to Contributors

Typescripts (two complete copies) should be sent to the Editor, Dr I. Gilliland, Postgraduate Medical Journal, Chandos House, 2 Queen Anne Street, London W1M 9LE. 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) **Summary**, brief, self-contained and embodying the main conclusions; (b) **Introduction**; (c) **Materials and methods**; (d) **Results**, as concise as possible (both tables and figures illustrating the same data will rarely be permitted); (e) **Discussion and conclusion**; (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) name(s) of the author(s); (b) year of publication in parentheses; (c)* title of paper; (d) title of journal in full, underlined; (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	percent	%

Example: mg/100 ml, for biochemical values; mEq/1

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.

* Titles of papers should be cited in their original form.