

REGISTER
for online access to
the full text of the BJA at:
<http://bjj.oxfordjournals.org>

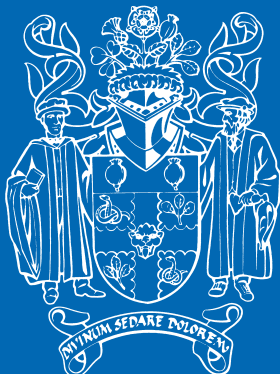
BJA

British Journal of Anaesthesia
International Journal of Anaesthesia

Volume 99 Number 6 December 2007

Editor-in-chief: Charles S. Reilly

- Outcomes in critically ill octogenarians
- EEG and AEP responses in children
- Prediction of difficult airway management



Journal of The Royal College of Anaesthetists

OXFORD JOURNALS
OXFORD UNIVERSITY PRESS

OXFORD  OPEN

Editorial Board 2007

Editor-in-Chief

CHARLES S. REILLY, Professor of Anaesthesia, *University of Sheffield*

Editors

- S. J. HOWELL, Senior Lecturer in Anaesthesia, *University of Leeds*
D. G. LAMBERT, Professor of Anaesthetic Pharmacology, *University of Leicester*
R. P. MAHAJAN, Professor of Anaesthesia and Intensive Care, *University of Nottingham*
D. R. SPAHN, Professor of Anaesthesia, *University Hospital Zurich, Switzerland*
M. M. R. F. STRUYS, Professor of Anaesthesia, *Ghent University Hospital, Ghent, Belgium*

Board Members

- F. BONNET, Professor of Anaesthesia, *Assistance Publique Hopitaux de Paris*
L. COLVIN, Consultant/Senior Lecturer in Anaesthesia and Pain Medicine, *Western General Hospital, University of Edinburgh*
C. DODDS, Vice President, *Royal College of Anaesthetists*
H. F. GALLEY, Senior Lecturer in Anaesthesia and Intensive Care, *University of Aberdeen*
G. M. HALL, Professor of Anaesthesia, *University of London*
J. G. HARDMAN (CME editor), Associate Professor and Reader in Anaesthesia, *University of Nottingham*
P. M. HOPKINS (Secretary), Professor of Anaesthesia, *University of Leeds*
J. A. HULF, President, *Royal College of Anaesthetists*
J. M. HUNTER (Chairman), Professor of Anaesthesia, *University of Liverpool*
P. A. LONNQVIST, Associate Professor of Paediatric Anaesthesia and Intensive Care, *Lingrens Children's Hospital, Stockholm, Sweden*
A. M. MOLLER, Consultant Anaesthetist, *KAS Herlev, Denmark*
I. POWER (Treasurer), Professor of Anaesthesia, Critical Care and Pain Medicine, *University of Edinburgh*
H.-J. PRIEBE, Professor of Anaesthesia, *University of Freiburg, Germany*
A.-M. ROLLIN, Vice President, *Royal College of Anaesthetists*
D. J. ROWBOTHAM, Professor of Anaesthesia and Pain Management, *University of Leicester*
J. W. SEAR, Professor of Anaesthesia, *University of Oxford*
J. R. SNEYD, Professor of Anaesthesia, *Peninsula Medical School, Plymouth*
J. P. THOMPSON, Senior Lecturer in Anaesthesia and Critical Care, *University of Leicester*
N. R. WEBSTER, Professor of Anaesthesia, *University of Aberdeen*
J. A. W. WILDSMITH, Professor of Anaesthesia, *Ninewells Hospital and Medical School, Dundee*

International Board Members

- T. ASAI, Assistant Professor, Department of Anaesthesiology, *Kansai Medical University, Japan*
F. CARLI, Wesley Bourne Professor and Chairman, Department of Anesthesia, *McGill University, Montreal, Canada*
H. C. HEMMINGS, Professor of Anesthesiology and Pharmacology, *Cornell University, New York*
K. HIROTA, Professor, Department of Anesthesiology, *University of Hirosaki, Japan*
G. LEES, Professor of Neurophysiology and Neuropharmacology, *University of Otago, New Zealand*
R. D. MILLER, Professor of Anesthesia, *University of California, San Francisco*
P. S. MYLES, Associate Professor, Department of Anaesthesia, *Alfred Hospital and Monash University, Australia*
S. L. SHAFER, Professor of Anaesthesia, *Stanford University, Palo Alto* and Adjunct Professor of Biopharmaceutical Sciences, *University of California, San Francisco*

Assistant Editors

- Z. L. S. BROOKES, Lecturer in Anaesthesia and Microcirculation, *University of Sheffield*
J. J. ROSS, Senior Lecturer in Cardiac Anaesthesia, *University of Sheffield*

Production Staff

- H. J. LAMB, Production Editor, *Oxford University Press*
Please visit the Journal's World Wide Web site at <http://bj.a.oxfordjournals.org>

General Information

Subscriptions

All Fellows of the College, world-wide, should notify changes of address directly to the Royal College of Anaesthetists.

An annual subscription to *BJA* comprises 12 issues (two volumes of 6 issues), with Author and Subject Indexes. Subscriptions are entered on a calendar year basis only. Please add local sales tax to the prices quoted. Prices include postage by surface mail, or for subscribers in the USA and Canada by Airfreight, or in Japan, Australia, New Zealand, and India by Air Speeded Post. Airmail rates are available on request.

Annual subscription rate 2007

Full rate (institutions): print and on-line £353, US\$618, €530; print only: £335, US\$586, €503; on-line only: £335, US\$586, €503

Personal: print £335, US\$586, €503

Trainee: print £165, US\$289, €248

ESA/EACTA/EAA/ESRA/JSA/IARS members: print £165, US\$289, €248

Single issue print only (institutions) £33, US\$53, €50

Orders

Orders and payments from, or on behalf of, subscribers in the various geographical areas shown below should be sent to the office indicated.

Methods of payment. Payment should be made: by cheque (to Oxford University Press, Cashiers Office, Great Clarendon Street, Oxford, OX2 6DP, UK); by bank transfer [to Barclays Bank Plc, Oxford Office, Oxford (bank sort code 20-65-18) (UK); overseas only Swift code BARC GB22 (GB£ Sterling Account no. 70299332, IBAN GB89BARC20651870299332; US\$ Dollars Account no. 66014600, IBAN GB27BARC20651866014600; EU€ EURO Account no. 78923655, IBAN GB16BARC20651878923655]; or by credit card (Mastercard, Visa, Switch or American Express).

The Americas: Oxford University Press Inc., 2001 Evans Road, Cary, NC 27513, USA.

Japan: available from the following agents:

Kinokuniya Company Ltd, Journal Department, PO Box 55, Chitose, Tokyo, 156 Japan.

Maruzen Company Ltd, Journal Division, PO Box 5050, Tokyo International, 100-31 Japan.

Usaco Corporation, 13-12 Shimbashi 1-chome, Minato-ku, Tokyo, 105 Japan.

Rest of the world: Oxford University Press, Journals Subscriptions Department, Great Clarendon Street, Oxford OX2 6DP, UK. Tel +44 (0)1865 353907; Fax: +44 (0)1865 353485; E-mail: jnls.cust.serv@oxfordjournals.org

Please address orders and enquiries about availability as follows: *For current volume and back numbers from Vol. 88 onwards* to Oxford University Press.

For Vols 1–87 to Periodicals Service Company, 11 Main Street, Germantown, NY 12526, USA. Tel: +1 (518) 537 4700; Fax: +1 (518) 537 5899.

Oxford Journals Environmental and Ethical Policies

Oxford Journals is committed to working with the global community to bring the highest quality research to the widest possible audience. Oxford Journals will protect the environment by implementing environmentally friendly policies and practices wherever possible. Please see <http://www.oxfordjournals.org/ethicalpolicies.html> for further information on Oxford Journals' environmental and ethical policies.

DOIs

For information about DOIs and to resolve them, please visit: <http://dx.doi.org/>

Rights and permissions

Please send any requests for permission to reproduce articles/information from this journal to: Rights and New Business Development, Journals Division, Oxford University Press, Great Clarendon Street, Oxford OX2 6DP, UK. Tel: +44 (0)1865 354490 or 353695; Fax: +44 (0) 1865 353485; E-mail: journals.permissions@oxfordjournals.org or visit www.oxfordjournals.org/jnls/permissions

Advertising

Advertising, inserts and artwork enquiries should be addressed to Advertising and Special Sales, Journals Division, Oxford University Press, Great Clarendon Street, Oxford, OX2 6DP, UK. Tel: +44 (0)1865 354767; Fax +44 (0)1865 353774; E-mail: jnlsadvertising@oxfordjournals.org.

© The Board of Management and Trustees of the British Journal of Anaesthesia 2007

All rights reserved; no part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise without the prior written permission of the *British Journal of Anaesthesia*, requests for which should be addressed to the Publisher, or a licence permitting restricted copying issued in the UK by the Copyright Licensing Agency Ltd, 90 Tottenham Court Road, London W1P 9HE, or in the USA by the Copyright Clearance Center, 222 Rosewood Drive, Danvers, MA 01923. For those in the US/Canada not registered with CCC, articles can be obtained by fax in 48 hours by calling: WISE for MedicineTM1-800-667-WISE.

British Journal of Anaesthesia (ISSN 0007-0912) is published monthly by Oxford University Press, Oxford, UK. *British Journal of Anaesthesia* Advance Access contains papers that have recently reached corrected proof stage, but have not yet been included within an issue. Advance Access is updated weekly.

British Journal of Anaesthesia is distributed by Mercury International, 365 Blair Road, Avenel, NJ 07001, USA. Periodicals postage paid at Rahway, New Jersey, and additional entry points.

US Postmaster: send address changes to *British Journal of Anaesthesia*, c/o Mercury International, 365 Blair Road, Avenel, NJ 07001, USA.

Disclaimer

Whilst every effort is made by the publishers and editorial committee to see that no inaccurate or misleading data, opinions or statements appear in this Journal, they wish to make it clear that the data and opinions appearing in the articles and advertisements herein are the responsibility of the contributor or advertiser concerned. Accordingly, the publisher and the editorial committee and their respective employees, officers and agents accept no liability whatsoever for the consequences of any such inaccurate or misleading data, opinions or statements. While every effort is made to ensure that drug doses and other quantities are presented accurately, readers are advised that new methods and techniques involving drug usage, and described within this Journal, should only be followed in conjunction with the drug manufacturer's own published literature.

Printed by Bell and Bain Ltd, Glasgow, UK.

Editorial Notices

ELECTRONIC SUBMISSION OF LETTERS TO THE EDITOR

(eletters)

All Letters to the Editor relating to an article published in the *BJA* must be submitted electronically through the *BJA* web site (<http://bj.oxfordjournals.org>). To submit a Letter to the Editor about an article published in the *BJA*, you need to 'Browse the Archive', enter the Full Text of the article, and then click on 'E-letters: Submit a response to the article', in the 'This Article' box on your right-hand side of the screen. To read Recent article eletters which have already been submitted, enter through this box on the *BJA* web site, View Current Issue page. To submit an Out of the blue eletter, which is unrelated to a recently published article in the *BJA*, follow the instructions after clicking on this box on the web site. You will be able to 'Submit a new Topic' as well as view recently submitted Out of the blue eletters. The Editor-in-Chief will select the best eletters each month for publication in the hard copy of the *BJA*.

Jennifer M Hunter
Charles S Reilly
Ravi Mahajan

April/May 2006

OXFORD OPEN

The *British Journal of Anaesthesia* is joining 'Oxford Open', an optional open access initiative from our publishers, Oxford University Press. Authors of manuscripts accepted after 3 April will be asked if they wish to choose to pay for access to the article to be made available immediately on publication. Oxford Open gives authors the opportunity to pay an 'open access' publication charge to make their paper **freely available online immediately** via the journal's web site. The optional charge payable will depend on whether the Corresponding Author is based in an institution with an online subscription to *BJA* and special charges will apply to authors in developing countries. Readers do not need a journal subscription to view open access content. If an author does not choose to pay the open access publication charge, their paper will be published in the normal manner (this usually means that it will only be available immediately to subscribers). More information about the initiative can be found at <http://www.oxfordjournals.org/oxfordopen/>

April 2006

British Journal of Anaesthesia/Royal College of Anaesthetists Research Grants 2006

The following project grant awards (by first named applicant) were made in 2006:

1. Professor N Webster, Aberdeen. Genomic expression and volatile anaesthetic mode of action – a systems biology approach. £49,995
2. Dr B Phillips, St Georges, London. An investigation of the relationship between glucose in airways secretions, lung inflammation and nosocomial lung infection in critically ill patients. £49,697
3. Professor RJ Sneyd, Peninsula, Plymouth. Pharmacokinetic (PK) and pharmacodynamic (PD) studies of clonidine/morphine and midazolam/morphine sedation in paediatric intensive care. £50,000
4. Dr SJ Wilson, Leeds. Development and validation of a blood-based screening test for prolonged ICU stay and severe post-operative systemic inflammatory response syndrome following coronary artery bypass grafting with cardiopulmonary bypass. £19,500

5. Professor R Mahajan, Nottingham. The role of alveolar macrophage TGF β activation in the development of acute lung injury and adult respiratory distress syndrome; a pilot study. £42,423

BMJ Masterclass for GPs: Mental Health (Manchester)

The University of Manchester Conference Centre, UK, December 5, 2007

Topics covered: Depression: quality standards in primary care; Drug and alcohol misuse; Unexplained multiple symptoms and somatisation; Cognitive behavioural therapy; Physical health in patients with mental illness; The future of mental healthcare.

BMJ Masterclass for GPs: Cardiology and Diabetes (Manchester)

The University of Manchester Conference Centre, UK, December 6, 2007

Topics covered: Heart failure: the essentials of management; Atrial fibrillation; Secondary prevention after myocardial infarction (MI); Complications of diabetes; Therapeutic challenges in the management of type 2 diabetes; Chronic kidney disease: when to refer to the nephrologist.

We recognise that keeping up with change in medicine is difficult, especially for busy GPs. These essential two-day updates make it easy for you to get to grips with changes across the infinite range of problems you encounter. Each day covers a wide variety of important clinical topics. Attend one or both programmes to fulfil your learning needs. These events are chaired by key contributors to the British Medical Journal. Leading experts bring you the latest evidence, guidelines, and best practice in an easy to understand and interactive format.

For further information on either of the above BMJ Masterclasses, please contact: Vicki Ng, Learning Department, BMJ Publishing Group, BMA House, Tavistock Square, London WC1H 9JR; Tel: +44 (0)20 7383 6012; Fax: +44 (0)20 7383 6869; E-mail: masterclasses@bmjgroup.com; Web site: <http://www.bmjmasterclasses.com/paediatrics>

13th Postgraduate Refresher Course

Free University of Brussels, Campus Erasme (Jaumotte Room), Brussels, Belgium, December 4–6, 2007

The aim of this Refresher Course is to review the essentials of cardiovascular and respiratory physiology applied to the comprehensive care of the critically ill patient. The target audience includes residents in training in intensive care medicine. For further information, please contact: Natercia Tavares, Route de Lennik 808, Brussels, Belgium; Tel: +322 555 36 31; Fax: +322 555 45 55; E-mail:

natercia.tavares@intensive.org; Web site: <http://www.intensive.org>

Annual Scientific Meeting of the UK Society for Intravenous Anaesthesia

Queens' College, Cambridge, UK, December 13–14, 2007

Scientific sessions on Thursday afternoon and Friday morning. Workshops on Thursday morning. Full details and online registration at www.Cambridge2007.org or contact: Dr Anthony Absalom, University Division of Anaesthesia, Addenbrookes Hospital, Cambridge CB2 2QQ; Tel: +44 (0)1223 217434; E-mail: Cambridge@sivauk.org

8th Euro-PNB

Hotel Le Mont Paisible, Crans-Montana, Switzerland, January 17–19, 2008

Welcome to the 8th Euro-PNB Winter Symposium! Postgraduate course for anaesthesiologists on use of Peripheral Nerve Blockades for surgery and pain management Meet European experts on these important subjects in an exciting environment. Topics: Why Regional anaesthesia? Pharmacology of LA Pain physiology and prevention Extremity block techniques Nerve localization-technical devices; Complications; LA wound infiltration; Workshops on extremity blocks; PNB in paediatrics; Sedation for PNB PNB in traumatology/emergency; Case discussions with expert panel. Full participation certifies 15 Eu CME points. Places limited to 40 participants. Course fee 350 CHF. Registration before December 1, 2007 to Prof A. Borgeat, Department of Anaesthesiology, Balgrist University Hospital, Forchstrasse 340, CH-8008 Zürich, Switzerland. Tel: +41 44 386 3101; Fax: +41 44 386 1109; E-mail: Alain.Borgeat@balgrist.ch

16th Winter Symposium on Intensive Care Medicine

Steamboat, CO, USA, January 28 to February 1, 2008

We invite you to join us for an exciting week of learning and debate in the classroom, and lively activities in the snow. Lectures, pro-con debates, and round tables will be organized during the morning and evening hours so that enough time will be left in between to enjoy the scenery of one of the biggest ski mountains in North America. For further information, please contact: Natercia Tavares, Route de Lennik 808, Brussels, Belgium; Tel: +322 555 36 31; Fax: +322 555 45 55; E-mail: natercia.tavares@intensive.org; Web site: <http://www.intensive.org>

19th Anaesthesia, ICM and Pain Medicine Update

Congress Centre, Val d'Isère, French Alps, February 4–7, 2008

An annual update meeting in Anaesthesia, Intensive Care and Pain Medicine: lectures, workshops, guest speakers. This year

also includes multidisciplinary sessions with radiologists, plastic surgeons, trauma and orthopaedic surgeons, and urologists. For full details please visit the website: www.doctorsupdates.com; E-mail: info@doctorsupdates.com; Tel: + 44 (0)2087250018; Fax: + 44 (0)2082748925.

28th International Symposium on Intensive Care and Emergency Medicine

Brussels Exhibition and Conventions Center, Brussels, Belgium, March 18–21, 2008

The objective of this four day symposium is to review concepts and technology and present recent advances in the management of critically ill patients. The symposium includes formal presentations as well as practical discussions such as tutorials, round tables, pro-con debates, “meet the experts” Original scientific posters will also be presented. The meeting is open to all physicians, nurse and other allied health professionals interested in intensive care and emergency medicine. Language: English. For further details, please contact: Marcos Garcia, Route de Lennik, 808, Brussels, Belgium; Tel: + 32 2 555 36 31; Fax: + 32 2 555 45 55; E-mail: sympicu@ulb.ac.be; Web site: <http://www.intensive.org>

Research Peer-Review Workshop: A meeting organized by the BJA

Royal College of Anaesthetists, Churchill House, London WC1, UK, April 24, 2008

Good peer-review is fundamental to the production of a high quality anaesthesia journal and the *BJA* has indeed benefited from the expertise of more than 1000 assessors over the past few years. The aim of this workshop is to support and develop peer-review skills in the context of the processes used by the *BJA*. You will learn about the place of the reviewer in the publication process and how this role relates to that of the editor. We will discuss what makes a good article and how to spot common flaws in study design, data presentation, and interpretation. You will be given a guided tour of our on-line manuscript handling

software. Finally, we will discuss conflicts of interest and how you can detect research and publication misconduct. In addition to formal presentations, the day will benefit from open discussion sessions and there will be plenty of opportunity to chat informally with the workshop faculty who are past and present members of the *BJA* editorial team.

While this meeting is intended principally for those who currently review *BJA* manuscripts and those who would be interested in doing so in future, the content will be relevant to those who peer-review manuscripts for other journals. The workshop will be of value also to those required to review research proposals for the purposes of clinical trial registration, research ethics committee approval and research grant awards.

Registration, including tea, coffee and lunch is free and places will be allocated on a first come, first served basis. Unfortunately, we cannot reimburse expenses but CPD approval has been given. To register, please complete the details below and send to: Courses & Meetings Department, Royal College of Anaesthetists, Churchill House, 35 Red Lion Square, LONDON, WC1R 4SG, UK.

Name:

Job title:

Institution:

Contact postal address:

E-mail address:

Have you previously reviewed manuscripts for the BJA?

If not, would you be interested in doing so?

Do you have any other experience of peer reviewing?

If so, please give brief details:

Backdated Copies of *British Journal of Anaesthesia* (from 1993)

If you are interested in these, please contact Dr Jane Baker, Specialist Anaesthetist, Department of Anaesthetics, Concord Hospital, PO Box 345, Concord West, NSW 2138, Australia. E-mail: iaspdesk@juno.com; web site: www.iasp-pain.org