



Journal of the British Thoracic Society

Impact Factor: 7.04

Editors

A Bush (UK)
I Pavord (UK)

Deputy Editors

P Cullinan (UK)
C Lloyd (UK)

Associate Editors

R Beasley (New Zealand) E Lim (UK)
J Brown (UK) D Mannino (USA)
A Custovic (UK) JL Pepin (France)
A Fisher (UK) T Sethi (UK)
P Gibson (Australia) M Steiner (UK)
J Grigg (UK) D Thickett (UK)
R Hubbard (UK) M Whyte (UK)
A Jones (UK) H Zar (South Africa)

Statistical Editors

J Gibson (UK)
L Tata (UK)

Images Editor

J M FitzGerald (Canada)

Lung Alert Editor

J Quint (UK)

President, British Thoracic Society

P Corris

Editorial Office

BMJ Publishing Group Ltd, BMA House,
Tavistock Square, London WC1H 9JR, UK
T: +44 (0)20 7383 6147
F: +44 (0)20 7383 6668
E: thorax@bmjgroup.com

ISSN: 0040-6376 (print)
ISSN: 1468-3296 (online)

Disclaimer: *Thorax* is owned and published by the British Thoracic Society and BMJ Publishing Group Ltd, a wholly owned subsidiary of the British Medical Association. The owners grant editorial freedom to the Editor of *Thorax*.

Thorax follows guidelines on editorial independence produced by the World Association of Medical Editors and the code on good publication practice of the Committee on Publication Ethics.

Thorax is intended for medical professionals and is provided without warranty, express or implied. Statements in the Journal are the responsibility of their authors and advertisers and not authors' institutions, the BMJ Publishing Group Ltd, the British Thoracic Society or the BMA unless otherwise specified or determined by law. Acceptance of advertising does not imply endorsement.

To the fullest extent permitted by law, the BMJ Publishing Group Ltd shall not be liable for any loss, injury or damage resulting from the use of *Thorax* or any information in it whether based on contract, tort or otherwise. Readers are advised to verify any information they choose to rely on.

Copyright: © 2011 BMJ Publishing Group Ltd and the British Thoracic Society. 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 permission of *Thorax*.

Thorax is published by BMJ Publishing Group Ltd, typeset by TNQ Books & Journals, Chennai, India and printed in the UK on acid-free paper by Latimer Trend & Co Ltd, Plymouth.

Thorax (ISSN No: 0040-6376) is published monthly by BMJ Publishing Group and distributed in the USA by Mercury International Ltd. Periodicals postage paid at Rahway, NJ. POSTMASTER: send address changes to *Thorax*, Mercury International Ltd, 365 Blair Road, Avenel, NJ, 07001, USA.

Editorials

- 1 Spirometric findings as predictors of survival
P Lange
- 2 Echocardiography, troponins and lower extremity ultrasound: the 'Three Musketeers' lead the prognosis of acute pulmonary embolism
A Vitarelli
- 4 How does diesel exhaust impact asthma?
J R Balmes

Asthma

- 7 Oral montelukast in acute asthma exacerbations: a randomised, double-blind, placebo-controlled trial
C F Ramsay, D Pearson, S Mildenhall, A M Wilson
- 12 Proinflammatory doses of diesel exhaust in healthy subjects fail to elicit equivalent or augmented airway inflammation in subjects with asthma
A F Behndig, N Larsson, J L Brown, N Stenfors, R Helleday, S T Duggan, R E Dove, S J Wilson, T Sandstrom, F J Kelly, I S Mudway, A Blomberg
- 20 Both environmental tobacco smoke and personal smoking is related to asthma and wheeze in teenagers
L Hedman, A Bjerg, S Sundberg, B Forsberg, E Rönmark

Chronic obstructive pulmonary disease

- 26 Effects of written action plan adherence on COPD exacerbation recovery
E W M A Bischoff, D H Hamd, M Sedeno, A Benedetti, T R J Schermer, S Bernard, F Maltais, J Bourbeau
- 32 A randomised trial of domiciliary, ambulatory oxygen in patients with COPD and dyspnoea but without resting hypoxaemia
R P Moore, D J Berlowitz, L Denehy, J J Pretto, D J Brazzale, K Sharpe, B Jackson, C F McDonald
- 38 Gender differences in survival following hospitalisation for COPD
A V Gonzalez, S Suissa, P Ernst
- 43 Acidosis, non-invasive ventilation and mortality in hospitalised COPD exacerbations
C M Roberts, R A Stone, R J Buckingham, N A Pursey, D Lowe, On behalf of the National Chronic Obstructive Pulmonary Disease Resources and Outcomes Project (NCROP) implementation group

Epidemiology

- 49 Forced vital capacity, airway obstruction and survival in a general population sample from the USA
P G J Burney, R Hooper

Smoking

- 55 Short-term effect of changes in smoking behaviour on emphysema quantification by CT
H Ashraf, P Lo, S B Shaker, M de Bruijne, A Dirksen, P Tønnesen, M Dahlbäck, J H Pedersen

Interstitial lung disease

- 61 Long-term follow-up high-resolution CT findings in non-specific interstitial pneumonia
M Akira, Y Inoue, T Arai, T Okuma, Y Kawata

Mechanical ventilation

- 66 Influence of body mass index on outcome of the mechanically ventilated patients
A Anzueto, F Frutos-Vivar, A Esteban, N Bensalami, D Marks, K Raymonds, C Apezteguía, Y Arabi, J Hurtado, M González, V Tomicic, F Abroug, J Elizalde, N Cakar, P Pelosi, N D Ferguson, for the Ventila group

Pulmonary vasculature

- 75 Combinations of prognostic tools for identification of high-risk normotensive patients with acute symptomatic pulmonary embolism
D Jiménez, D Aujesky, L Moores, V Gómez, D Martí, S Briongos, M Monreal, V Barrios, S Konstantinides, R D Yusen

Review series

- 82 Non-invasive ventilation during sleep: time to define new tools in the systematic evaluation of the technique
M W Elliott

MORE CONTENTS ►

Cover credit: *Streptococcus*, a round bacterium that causes scarlet fever, angina, septicemia, meningitis, neonatal infection, endocarditis, pneumonia, erysipelas, knotty erythema, rheumatoid purpura, and urinary infection / JAMES CAVALLINI / SCIENCE PHOTO LIBRARY.



This article has been chosen by the Editor to be of special interest or importance and is freely available online.



Articles carrying the Unlocked Logo are freely available online under the BMJ Journals unlocked scheme. See <http://thorax.bmj.com/info/unlocked.dtl>



This journal is a member of and subscribes to the principles of the Committee on Publication Ethics

www.publicationethics.org.uk



When you have finished with this magazine please recycle it.

PostScript**86** Letters**Miscellanea****54** Pulmonary puzzle: An unusual case of refractory asthma*W-T N Lee, A Brown, S Banham, H Walker, M Johnson***60** Lung alert: Serological data improves estimates of infection during 2009 H1N1 pandemic*H K Bayes***73** Lung alert: Vitamin B deficiency may increase risk of lung cancer*O Hashmi*

Images in Thorax**89** Primary Ewing's sarcoma presenting as a Pancoast tumour*L Vanfleteren, R van Stiphout, R G Riedl, R Jansen, D De Ruyscher, A-M C Dingemans*