

Journal of the British Thoracic Society

J-L Pepin (France) M Polkey (UK)

J Quint (UK)

N Rahman (UK)

K Robinson (USA)

S Shaheen (UK)

T Wilkinson (UK)

P Wolters (USA)

R Stevens (USA) A Vonk Noordegraaf

(The Netherlands)

C Wainwright (Australia)

Impact Factor: 8.272

Editors-in-Chief

N Hart (UK) G Jenkins (UK) AR Smyth (UK)

Deputy Editors

N Kaminski (USA) M Rosenfeld (USA)

Associate Editors

D Baldwin (UK) R Chambers (UK) T Coleman (UK) GJ Criner (USA) .I Davies (LIK) A Floto (UK) M Griffiths (UK) L Heaney (UK) N Hopkinson (UK)

S Janes (UK) B Kampman (UK) P O'Byrne (Canada)

Statistical Editors

A Douiri (UK) C Flach (UK) C Jackson (UK) S Stanojevic (USA) R Szczesniak (USA) B Wagner (USA)

Y Wang (UK) Journal Club Editor

P Murphy (UK) **President, British Thoracic Society**

Professor E Chilvers

Editorial Office

Thorax, BMA House, Tayistock Square, London WC1H 9JR, UK

T: +44 (0)20 7383 6373 E: thorax@bmj.com

Twitter: @ThoraxBMJ

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 Thotax is interlied on Interlied processionals and or provided without warranty, express or implied. Statements in the Journal are there sponsibility of their authors and advertisers and not authors' institutions, the BMJ Publishing Group Ltd, the British Thoracic Society or theBMAunless 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: © 2018 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

Thorax is published by BMJ Publishing Group Ltd, typeset by Exeter Premedia Services Private Ltd, Chennai, India and printed in the UK on acid-free

Thorax (ISSN No: 0040–6376) is published monthly by BMJ Publishing Group and distributed in the USA by Air Business Ltd. Periodicals postage paid at Jamaica NY 11431 - POSTIMASTER: send address changes to Thorax. Air Business Ltd., c/o Worldnet Shipping Inc., 156-15, 146th Avenue 2nd Floor, Jamaica, NY 11434, USA.

Editorials

Contents

Imaging pathophysiological changes in the lungs in IPF with xenon magnetic resonance imaging I M Wild

2 How do we improve training in pulmonary physiology and the interpretation of lung function tests?

G Phillips

- 4 Quantification of CT bronchiectasis and its relationship to ventilation in cystic fibrosis T Rosenow
- 5 NERO: a pilot study but important step towards comprehensive management of obesity hypoventilation syndrome J-C Borel, A L Borel, A J Piper

Critical care

Perspectives of survivors, families and researchers on key outcomes for research in acute respiratory failure

> VD Dinglas, CM Chessare, WE Davis, A Parker, L A Friedman, E Colantuoni, C O Bingham, A E Turnbull, D M Needham

Cystic fibrosis

Respiratory viruses in healthy infants and infants with cystic fibrosis: a prospective cohort study

> I Korten, E Kieninger, S Klenja, I Mack, N Schläpfer, M T Barbani, N Regamey, C E Kuehni, M Hilty, U Frey, M Gorgievski, C Casaulta, P Latzin

Interstitial lung disease

Using hyperpolarized ¹²⁹Xe MRI to quantify regional gas transfer in idiopathic pulmonary fibrosis

> J M Wang, S H Robertson, Z Wang, M He, R S Virgincar, G M Schrank, R M Smigla, T G O'Riordan, J Sundy, L Ebner, C R Rackley, P McAdams, B Driehuys, for the SCILD and BILD study groups

Rehabilitation



Comparison of a structured home-based rehabilitation programme with conventional supervised pulmonary rehabilitation: a randomised non-inferiority trial

E J Horton, K E Mitchell, V Johnson-Warrington, L D Apps, L Sewell, M Morgan, R S Taylor, S I Singh

Respiratory epidemiology

37

Prevalence of asthma-like symptoms with ageing

Volume 73 Issue 1 | THORAX January 2018

OPEN ACCESS

D Jarvis, R Newson, C Janson, A Corsico, J Heinrich, J M Anto, M J Abramson, A-M Kirsten, IP Zock, R Bono, P Demoly, B Leynaert, C Raherison, I Pin, T Gislason, R Jogi, V Schlunssen, C Svanes, I Watkins, I Wevler, A Pereira-Vega, I Urrutia, J A Gullón, B Forsberg, N Probst-Hensch, H M Boezen, J Martinez-Moratalla Rovira, S Accordini, R de Marco, P Burney

Respiratory infection

49 Pseudomonas aeruginosa LasB protease impairs innate immunity in mice and humans by targeting a lung epithelial cystic fibrosis transmembrane regulator-IL-6-antimicrobialrepair pathway

V Saint-Criq, B Villeret, F Bastaert, S Kheir, A Hatton, A Cazes, Z Xing, I Sermet-Gaudelus, I Garcia-Verdugo, A Edelman, J-M Sallenave

Sleep

62 Nutrition and Exercise Rehabilitation in Obesity hypoventilation syndrome (NERO): a pilot randomised controlled trial

S Mandal, E-S Suh, R Harding, A Vaughan-France, M Ramsay, B Connolly, D E Bear, H MacLaughlin, S A Greenwood, M I Polkey, M Elliott, T Chen, A Douiri, I Moxham, P B Murphy, N Hart

Tuberculosis

Comorbidities, mortality and causes of death among patients with tuberculosis in Denmark 1998–2010: a nationwide, register-based case-control study

A Fløe, O Hilberg, C Wejse, R Ibsen, A Løkke

Cover caption: Central and posterior coronal slices of ventilation barrier uptake and RBC transfer, binning maps and CT images in one healthy subject and four subjects with IPF (see Wang J M, et al., page 24).



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

This article has been made freely available online under the BMJ Journals Open Access scheme.

See http://authors.bmj.com/open-access/



http://publicationethics.org/





Research letters

78 Does training respiratory physicians in clinical respiratory physiology and interpretation of pulmonary function tests improve core knowledge?

M Patout, L Sesé, T Gille, B Coiffard, S Korzeniewski, E Lhuillier, A Pradel, C Tardif, A Chambellan, C Straus, S Matecki, T Perez, L Thiberville, A Didier

- 82 The quantitative link of lung clearance index to bronchial segments affected by bronchiectasis S Verbanck, G G King, W Zhou, A Miller, C Thamrin, D Schuermans, B Ilsen, C W Ernst, J de Mey, W Vincken, E Vanderhelst
- **85** Novel imaging detailing the origins of a pneumothorax

K Nakanishi, H Goto, T Ito, Y Nagata, S Hayashi, T Ishihara

88 One evidence base; three stories: do opioids relieve chronic breathlessness?

M. Ekström, S. Baiwah, I.M. Bland, D. C. Currow,

M Ekstrom, S вајwan, ј M Biana, D С Currow, Ј Hussain, M J Johnson

Chest clinic

Case based discussions

91 Empyema necessitans and a persistent air leak associated with rupture of an anaerobic lung abscess due to bacteroides

V Sharma, K G Blyth

Images in Thorax

- 94 Herpes simplex lesion mimicking left upper lobe bronchial tumour G C Dantas, H Shoji, C Hoelz, M Buarque d G Funari, G Szarf
- **96** Extrathoracic hyperinflation *M Bruyneel, V Ninane*
- **97** Vocal fold paralysis on positron emission tomography-CT *C Ma, Z A K Frosch, B Overmoyer, A Z Cooper*

Journal club summaries

100 What's hot that the other lot got NMShah