

# Respiration

Vol. 49, 1986

## International Review of Thoracic Diseases

Founded 1944 as 'Schweizerische Zeitschrift für Tuberkulose und Pneumologie' by E. Bachmann, M. Gilbert, F. Häberlin, W. Löffler, P. Steiner and E. Uehlinger, continued 1962–1967 as 'Medicina Thoracalis'

### Editor

H. Herzog, Basel

### Editorial Board

H. Bachofen, Bern  
S. Bianco, Siena  
P.L.B. Bruijnzeel, Utrecht  
M. Campbell, Hamilton  
R.M. Cherniack, Denver, Colo.  
S.W. Clarke, London  
H.J.H. Colebatch, Little Bay  
M.A. De Kock, Tygerberg  
P. Drings, Heidelberg  
J.-F. Dumon, Marseille  
H. Fabel, Hannover  
D.C. Flenley, Edinburgh  
P. Freour, Pessac  
G.A. Gaensler, Boston, Mass.  
P. Godard, Montpellier  
S. Godfrey, Jerusalem  
C. Grassi, Pavia

K. Harnoncourt, Graz  
W. Hartung, Bochum-Querenburg  
J.C. Hogg, Vancouver  
M.J. Holtzman,  
San Francisco, Calif.  
K.F. Kerrebijn, Rotterdam  
F. Kummer, Wien  
L.A. Laitinen, Helsinki  
H. Magnussen, Grosshansdorf  
H. Matths, Freiburg i.Br.  
J. Meier-Sydow, Frankfurt a.M.  
D. Nolte, Bad Reichenhall  
J. Offermeier, Potchefstroom  
M. Paneth, London  
J.W. Paterson, Nedlands  
C. Perret, Lausanne  
A. Perruchoud, Basel

J. Piiper, Göttingen  
L. Reid, Boston, Mass.  
V. Sill, Hamburg  
B.G. Simonsson, Lund  
G.L. Snider, Boston, Mass.  
A. Soffer, Park Ridge, Ill.  
M. Sudlow, Edinburgh  
P. Suter, Genève  
M. Turner-Warwick, London  
W.T. Ulmer, Bochum  
I. Vogt-Moykopf, Heidelberg  
A. Wanner, Miami Beach, Fla.  
S.I. Wassermann, San Diego, Calif.  
P. von Wichert, Marburg  
J.G. Widdicombe, London  
J. Widimsky, Praha  
D.C. Zavala, Iowa City, Iowa

S. Karger · Medical and Scientific Publishers

Basel · München · Paris · London · New York · New Delhi · Singapore · Tokyo · Sydney

---

#### Drug Dosage

The authors and the publisher have exerted every effort to ensure that drug selection and dosage set forth in this text are in accord with current recommendations and practice at the time of publication. However, in view of ongoing research, changes in government regulations, and the constant flow of information relating to drug therapy and drug reactions, the reader is urged to check the package insert for each drug for any change in indications and dosage and for added warnings and precautions. This is particularly important when the recommended agent is a new and/or infrequently employed drug.

#### All rights reserved.

No part of this publication may be translated into other languages, reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying, recording, microcopying, or by any information storage and retrieval system, without permission in writing from the publisher or, in the case of photocopying, direct payment of a specified fee to the Copyright Clearance Center (see 'Information for Readers and Subscribers').

© Copyright 1986 by  
S. Karger AG, P.O. Box, CH-4009 Basel (Switzerland)  
Printed in Switzerland by Buchdruckerei  
National-Zeitung + Basler Nachrichten AG, Basel

# Contents Vol. 49, 1986

---

<b>No. 1</b>	<b>Original Papers</b>	
	Bronchial Hyperreactivity and Bronchial Obstruction in Respiratory Viral Infection. An Attempt to Evaluate the Relationship Löwenberg, A.; Orié, N.G.M.; Sluiter, H.J.; Vries, K. de . . . . .	1
	Role of Prostaglandins in Marijuana-Induced Bronchodilation Laviolette, M.; Bélanger, J. . . . .	10
	Changes of Volume of Trapped Gas after Bronchodilation in Subjects with Suspected Subclinical Emphysema Christensson, P.; Arborelius, M., Jr.; Kautto-Wiberg, R. . . . .	16
	Mean Transit Time, Forced Expiratory Volume and Age in Healthy Male Smokers and Non-Smokers Bosisio, E.; Scoccimarro, A.; Rizzi, M.; Raguso, A.; Sergi, M. . . . .	23
	Serotonin Receptors in Rat Lung Das, D.K.; Steiberg, H. . . . .	27
	Hyperventilation Syndrome: Measurement of Objective Symptoms and Subjective Complaints Stoop, A.; Boo, T. de; Lemmens, W.; Folgering, H. . . . .	37
	Bronchoalveolar Lavage in Extrinsic Allergic Alveolitis Bosch, J.M.M. van den; Heye, C.; Wagenaar, S.S.; Velzen-Blad, H.C.W. van . . . . .	45
	Comparison of Lung Volume Measurements by Single Breath Helium and Multiple Breath Nitrogen. Equilibration Methods in Normal Subjects and COPD Patients Brugman, T.M.; Morris, J.F.; Temple, W.P. . . . .	52
	Peptide Hormone Immunoreactivity and Prognosis in Small-Cell Carcinoma of the Lung Kasurinen, J.; Syrjänen, K.J. . . . .	61
	Effect of Chronic Vanadate Administration on Pulmonary Circulation in the Rat Sušić, D.; Kentera, D. . . . .	68
	Intrathoracic Amyloid Lymphadenopathy Naschitz, J.E.; Yeshurun, D.; Pick, A.I. . . . .	73
	<b>Case Report</b>	
	Metastatic Pulmonary Calcification in a Patient with Nonsecretory Multiple Myeloma Kempter, H.; Hagner, G.; Savaser, A.N.; Huben, H.; Minguillon, C. . . . .	77
<b>No. 2</b>	<b>Original Papers</b>	
	Airway Resistance Measurements throughout the Respiratory Cycle in Infants Beardsmore, C.S.; Godfrey, S.; Shani, N.; Maayan, C.; Bar-Yishay, E. . . . .	81
	The Reproducibility of the Respiratory Responses to Maximum Exercise Garrard, C.S.; Emmons, C. . . . .	94

Effects of Beta-Agonists on Breathlessness and Exercise Tolerance in Patients with Chronic Obstructive Pulmonary Disease Papiris, S.; Galavotti, V.; Sturani, C. . . . .	101
The Effects of Passive CO <sub>2</sub> Removal on Breathing Pattern in Humans Rossing, T.H.; Saari, A.F.; Lazarus, J.M.; Weiss, J.W. . . . .	109
Changes Induced by Severe Hypoxia in Respiratory Defence Reflexes in Anaesthetized Cats Tatár, M.; Korpáš, J.; Poláček, H.; Záhradný, V. . . . .	114
Respiratory Effects of Chronic Intrathoracic Vagotomy in Rabbits Szereda-Przestaszewska, M. . . . .	122
Respiratory Drive and Timing during Assisted Ventilation in Dogs Jasper, A.C.; Sassoon, C.S.H.T.; Simmons, D.H. . . . .	130
Assessment of Activity in Chronic Sarcoidosis: Usefulness of Serum Angiotensin Converting Enzyme and Gallium Scan Rohatgi, P.K.; Kuzmowych, T.V. . . . .	140
Chondrosarcoma of the Trachea. Report of a Case Arévalo, M.; Ordi, J.; Renedo, G.; Rami, R.; Oliva, H. . . . .	147
Frequency of Distribution according to Histological Types of Lung Cancer in the Tracheobronchial Tree Çelikoğlu, S.I.; Aykan, T.B.; Karayel, T.; Demirci, S.; Göksel, F.M. . . . .	152
Amiodarone-Induced Pulmonary Toxicity Cazzadori, A.; Braggio, P.; Barbieri, E.; Ganassini, A. . . . .	157

**No. 3****Original Papers**

Arterial Oxygenation and Oxygen Transport during Exercise in Patients with Chronic Obstructive Pulmonary Disease Stewart, R.I.; Lewis, C.M. . . . .	161
Qu'implique la découverte d'une valeur de compliance pulmonaire élevée? Thenault, D.; Friemel, F.; Cannet, G.; Larger, C. . . . .	170
A Simplified Procedure for Exponential Fitting of Pressure-Volume Curves of Normal and Diseased Lungs Boggard, J.M.; Jonker, W.; Verbraak, A.F.M.; Versprille, A. . . . .	181
Role of Hypocapnia in the Alveolar Surfactant Increase Induced by Free Fatty Acid Intravenous Infusion in the Rabbit Oyarzún, M.J.; Donoso, P.; Quijada, D. . . . .	187
Functional Evaluation in Stage I Pulmonary Sarcoidosis Scano, G.; Monechi, G.C.; Stendardi, L.; Lo Conte, C.; Van Meerhaeghe, A.; Sergysels, R. . . . .	195
The Pathophysiology and Response to Steroid Therapy in Sarcoidosis Ploysongsang, Y.; Roberts, R.D. . . . .	204
Alternating Chemotherapy, Prophylactic Cranial Irradiation and Late Local Thoracic Irradiation for Small-Cell Lung Cancer ten Velde, G.P.M.; Wouters, E.F.M.; Greve, L.H.; Vermeulen, A.; Keijser, A.H.; Blijham, G.H. . . . .	216
Treatment of Lower Respiratory Tract Infections with Ceftriaxone and Cefotaxime. A Comparative Study Abbate, G.F.; Alagia, I.; Giaquinto, E.; Leonessa, V.; Savioli, L.; Altucci, P.; Caputi, M.; Guarino, C.; Micillo, E.; Catena, E. . . . .	222

Febarbamate-Induced Pulmonary Eosophilia: A Case Report Gali, J.M.; Vilanova, J.L.; Mayos, M.; Cornudella, R.; Heras, P. de las; Rodriguez Arias, J.M. . . . .	231
Disseminated Aspergillosis in a Patient with Bronchiectasis. A 15-Month Clinical and Immunological Follow-Up Lemarié, E.; Lemaire, B.; Saudeau, D.; Lavandier, M.; Renoux, M.; Renoux, G. . . . .	235

**No. 4****Original Papers**

Pulmonary Function Tests in the Detection of Left Heart Failure: Correlation with Pulmonary Artery Wedge Pressure Ries, A.; Gregoratos, G.; Friedman, P.J.; Clausen, J.L. . . . .	241
Effects of Captopril on Hemodynamics and Blood Gases in Chronic Obstructive Lung Disease with Pulmonary Hypertension Bertoli, L.; Cicero, S.L.; Busnardo, I.; Rizzato, G.; Montanari, G. . . . .	251
Control of Breathing in Patients with Chronic Obstructive Lung Diseases and Secondary Polycythemia after Venesection Patakas, D.A.; Christaki, P.I.; Louridas, G.E.; Sproule, B.J. . . . .	257
Discriminating Power of Measurements from Maximum Expiratory Flow-Volume Curves Marrero, O.; Beck, G.J.; Schachter, E.N. . . . .	263
BTPS Correction with Dynamic Spirometers Forche, G.; Harnoncourt, K.; Stadlober, E.; Zenker, G. . . . .	274
Tissue Oxygenation: Another Aspect of the Fick Equation Gondos, T.; Kiss, P.; Péntzes, I.; Kulka, F. . . . .	280
Oscillatory Cardiopulmonary Effects of High-Frequency Jet Ventilation Gotshall, R.W.; Miles, D.S.; Sexson, W.R.; Spohn, W.A.; Courtney, S.E. . . . .	283
Increase of Serum Angiotensin-Converting Enzyme Level after Exposure to Cigarette Smoke and Nicotine Infusion in Dogs Sugiyama, Y.; Yotsumoto, H.; Takaku, F. . . . .	292
Effect of Ketotifen on the Bronchodilating Action of Aminophylline Hendy, M.S.; Sherwood Burge, P.; Stableforth, D.E. . . . .	296
Incidence of Serum-Precipitating Antibodies to Farmer's Lung Antigens in Hokkaido Homma, Y.; Terai, T.; Matsuzaki, M. . . . .	300
Ante mortem Diagnosis of Primary Leiomyosarcoma of the Pulmonary Artery Balduin, R.; Drigo, R.; Schiraldi, C.; Carraro, R. . . . .	307
<b>Letter to the Editor</b>	
Pulmonary Involvement in Sjögren's Syndrome Strimlan, C.V. . . . .	311
Author Index . . . . .	312
Subject Index . . . . .	313