

Get Full Access and More at

ExpertConsult.com

Clinical Cases in Tropical Medicine



Edited by

Camilla Rothe

CLINICAL CASES IN TROPICAL MEDICINE

CAMILLA ROTHE MD DTM&H

Clinical Lecturer
Department of Medicine
Division of Tropical Medicine and Infectious Diseases
University of Hamburg School of Medicine
Hamburg, Germany

For additional online content visit ExpertConsult.com

ELSEVIER
SAUNDERS

The right of Camilla Rothe to be identified as author of this work has been asserted by her in accordance with the Copyright, Designs and Patents Act 1988.

No part of this publication may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopying, recording, or any information storage and retrieval system, without permission in writing from the publisher. Details on how to seek permission, further information about the Publisher's permissions policies and our arrangements with organizations such as the Copyright Clearance Center and the Copyright Licensing Agency, can be found at our website: www.elsevier.com/permissions. This book and the individual contributions contained in it are protected under copyright by the Publisher (other than as may be noted herein).

The chapter entitled Case 21, A 35-year-old American man with fatigue and a neck lesion is in the public domain.

Notices

Knowledge and best practice in this field are constantly changing. As new research and experience broaden our understanding, changes in research methods, professional practices, or medical treatment may become necessary.

Practitioners and researchers must always rely on their own experience and knowledge in evaluating and using any information, methods, compounds, or experiments described herein. In using such information or methods they should be mindful of their own safety and the safety of others, including parties for whom they have a professional responsibility.

With respect to any drug or pharmaceutical products identified, readers are advised to check the most current information provided (i) on procedures featured or (ii) by the manufacturer of each product to be administered, to verify the recommended dose or formula, the method and duration of administration, and contraindications. It is the responsibility of practitioners, relying on their own experience and knowledge of their patients, to make diagnoses, to determine dosages and the best treatment for each individual patient, and to take all appropriate safety precautions.

To the fullest extent of the law, neither the Publisher nor the authors, contributors, or editors, assume any liability for any injury and/or damage to persons or property as a matter of products liability, negligence or otherwise, or from any use or operation of any methods, products, instructions, or ideas contained in the material herein.

ISBN: 9780702058240

e-book ISBN: 9780702058264

Printed in China

Last digit is the print number: 9 8 7 6 5 4 3 2 1

Content Strategist: Belinda Kuhn

Content Development Specialist: Poppy Garraway

Content Coordinator: Humayra Rahman Khan

Project Manager: Caroline Jones

Design: Miles Hitchen

Marketing Manager: Katie Alexo



Working together
to grow libraries in
developing countries

www.elsevier.com • www.bookaid.org

CLINICAL CASES IN TROPICAL MEDICINE

FOREWORD

Peter Hotez MD PhD FAAP FASTMH*

Information from the recently published Global Burden of Disease Study 2010 indicates that the world's major tropical infections, including malaria and the 17 major neglected tropical diseases (NTDs) identified by the World Health Organization, exert a horrific toll on human life^{1,2}. Together these diseases kill more than one million people annually,¹ while causing chronic and disabling effects measured in DALYs (disability-adjusted life years) that exceed almost any other cause of illness.² Tuberculosis and HIV/AIDS are also devastating infections that disproportionately occur in tropical developing countries.

Even beyond their adverse health impact, the leading tropical diseases are significant causes of economic underdevelopment – indeed they are the most common diseases of poor people and have been shown to thwart economic productivity through their negative effects on child health and the productivity of agricultural workers.³ These diseases also disproportionately devastate girls and women through their ability to damage the female urogenital tract or cause disfigurement and stigma.⁴ Tropical diseases are the secret scourge of girls and women.

Despite their enormous global importance, there is a surprising lack of knowledge about tropical diseases among health care professionals including physicians. For example, recent studies from the United States Centers for Disease Control and Prevention indicate that very few US medical doctors know how to recognize and diagnose Chagas disease (American trypanosomiasis) even though it is now an important cause of heart disease in the US.^{5,6} As a result, thousands of Chagas disease cases may go undiagnosed every year and patients inadvertently denied access to essential trypanocidal medicines. This finding emphasizes an emerging concept in tropical medicine that many parasitic and related infections occur outside of the poorest countries, with high levels of transmission also occurring in generally wealthy countries such as in the US or Eastern and Southern Europe.^{7,8} The term 'blue marble health' has been coined to account for the finding that many of the world's neglected tropical diseases are found predominantly among the extreme poor living amidst wealth.⁹ In other words, poverty has emerged as the overriding social determinant of neglected tropical diseases.

Clinical Cases in Tropical Medicine ('*Clinical Cases*') is a key companion volume to the recently published 23rd Edition of Manson's Tropical Diseases, but it will also be useful alongside other complete tropical medicine textbooks. An important role for *Clinical Cases* is to provide important practical applications and illustrative case reports in order to reinforce the material in these comprehensive texts. Comprised of 76 detailed clinical cases from as many tropical medicine physicians across the world, *Clinical Cases* provides an excellent learning opportunity to reinforce concepts on practical approaches to the diagnosis, management, and treatment of the major tropical diseases endemic to Africa, Asia and the Americas. The book should be useful for trainees and practitioners working in disease-endemic developing countries, as well as those working in clinical settings that see immigrants or travelers from affected regions and now people living in poverty in North America and Europe who also suffer from these afflictions. *Clinical Cases* should serve as a powerful learning tool for years to come!

*Peter Hotez is Texas Children's Hospital Endowed Chair of Tropical Pediatrics, Professor of Pediatrics and Molecular Virology and Microbiology, and Dean of the National School of Tropical Medicine at Baylor College of Medicine in Houston, Texas.

References Cited

1. Lozano R, Naghavi M, Foreman K, et al. Global and regional mortality from 235 causes of death for 20 age groups in 1990 and 2010: a systematic analysis for the Global Burden of Disease Study 2010. *Lancet* 2012;380:2095–128.
2. Murray CJ, Vos T, Lozano R, et al. Disability-adjusted life years (DALYs) for 291 diseases and injuries in 21 regions, 1990–2010: a systematic analysis for the Global Burden of Disease Study 2010. *Lancet* 2012;380:2197–223.
3. Hotez PJ, Fenwick A, Savioli L, et al. Rescuing the bottom billion through control of neglected tropical diseases. *Lancet* 2009;373:1570–5.
4. Hotez PJ, Whitham M. Helminth infections: a new global women's health agenda. *Obst Gynecol* 2014;in press.
5. Stimpert KK, Montgomery SP. Physician awareness of Chagas disease, USA. *Emerg Infect Dis* 2010;16:871–2.
6. Verani JR, Montgomery SP, Schulkin J, et al. *Am J Trop Med Hyg* 2010;83:891–5.
7. Hotez PJ. Neglected infections of poverty in the United States of America. *PLOS Negl Trop Dis* 2008;2:e256.
8. Hotez PJ, Gurwith M. Europe's neglected infections of poverty. *Int J Infect Dis* 2011;15:e611–19.
9. Hotez PJ. NTDs V.2.0: 'Blue marble health' – neglected tropical disease control and elimination in a shifting health policy landscape. *PLOS Negl Trop Dis* 2013;7:e2570.



PREFACE

Do you speak any Latin? No? – You may have spent quite a few years of your life studying an ancient language, but you still would not be able to survive in a place like ancient Rome if a time machine took you there since you were never trained to converse in that language. Reading medical textbooks may be a similar experience: you may acquire a considerable amount of theoretical knowledge, but still struggle to apply it when suddenly confronted with a patient. This is why this book has been written – to enable you to effortlessly put your knowledge of tropical medicine into practice.

This book contains 76 real cases from all over the tropical world. It has no claim to be a comprehensive textbook of tropical medicine, however, all cases are real and their authors have extensive experience working in the tropics. Apart from confronting you with a challenging clinical problem the authors will share with you the daily realities at their workplace in the tropics – few available investigations, patchy test results, conflicting cultural beliefs, stock-outs of essential drugs and other challenges that you may only read between the lines of a conventional textbook.

The book equally covers tropical medicine and medicine in the tropics, infectious diseases and travel medicine, since for the practising clinician working in the tropics the division into subspecialties is of little use. Also, the same tropical disease may present in a very different manner in a returning traveller compared to a patient born in an endemic country.

Clinical Cases in Tropical Medicine has been written for doctors and senior medical students who already have some background knowledge in tropical medicine which they wish to put into practice. It shall help the reader prepare for an occupational stay in a tropical country and equally be useful to prepare for examinations, like the Diploma in Tropical Medicine and Hygiene (DTM&H) or a specialist examination. It can also just be used by anyone who takes pleasure in puzzling cases in tropical medicine for the mere fun of it.

This book has been developed as a companion book to *Manson's Tropical Diseases* 23rd edition, however, it can be read alongside any other textbook of tropical medicine. It can also be used on its own since every case presentation closes with a 'summary box' providing a brief synopsis of the clinical problem discussed.

LIST OF CONTRIBUTORS

Charlotte Adamczick, MD DTM&H MScIH

General Paediatrician, Private Practice,
St Gallen, Switzerland, Guest Lecturer,
Tropical Institute, Berlin, Germany

**Andrew Bastawrous, MB ChB BSc (Hons)
FHEA MRCOphth**

Clinical Research Fellow in International Eye
Health, International Centre for Eye Health,
Clinical Research Department, London
School of Hygiene & Tropical Medicine,
London, UK

Sudhir Babji, MD

Assistant Professor, The Wellcome Trust
Research Laboratory, Division of
Gastrointestinal Sciences, Christian
Medical College, Vellore, India

**M. Jane Bates, BSc MB ChB MPhil
(Pall Med)**

Clinical Lecturer, Department of Medicine,
College of Medicine, Blantyre, Malawi

Daniel G. Bausch, MD MPH&TM

Associate Professor, Department of Tropical
Medicine, Tulane School of Public Health
and Tropical Medicine, Clinical Associate
Professor, Department of Medicine, Section
of Adult Infectious Diseases, Tulane Medical
Center, New Orleans, LA, USA

**Nicholas A.V. Beare, MA MBChB
FRCOphth MD**

Consultant Ophthalmologist, St Paul's Eye
Unit, Royal Liverpool University Hospital,
Liverpool, UK

Marleen Boelaert, MD PhD

Professor, Department of Public Health,
Institute of Tropical Medicine, Antwerp,
Belgium

Gerd-Dieter Burchard, MD

Professor, ifi-Institut for Interdisciplinary
Medicine, Hamburg, Germany

Beatriz Bustamante, MD

Head of the Mycology Laboratory and
Associate Researcher, Instituto de Medicina
Tropical Alexander von Humboldt,
Universidad Peruana Cayetano Heredia,
Lima, Peru, Assistant Physician, Department
of Transmissible and Dermatological
Diseases, Hospital Nacional Cayetano
Heredia, Lima, Peru

Fátima Concha, MD

Medical doctor, Instituto de Medicina Tropical
Alexander von Humboldt, Universidad
Peruana Cayetano Heredia, Lima, Peru

Bart Currie, FRACP

Professor in Medicine and Head of Infectious
Diseases, Infectious Diseases Department
and Global and Tropical Health Division,
Royal Darwin Hospital and Menzies School
of Health Research, Darwin, NT, Australia

David Dance, MB ChB MSc FRCPATH

Clinical Research Microbiologist, Lao–Oxford–
Mahosot Hospital–Wellcome Trust Research
Unit, Microbiology Laboratory, Mahosot
Hospital, Vientiane, Lao PDR and Centre
for Tropical Medicine, University of Oxford,
Oxford, UK

Sebastian Dieckmann, MD

Senior Clinical Consultant, Institute of Tropical
Medicine and International Health, Charité
– Universitätsmedizin Berlin, Berlin,
Germany

Viravong Douangnoulak, MD

Head, Department of Otorhinolaryngology,
Mahosot Hospital, Vientiane, Laos PDR

Ivy Ekem, MB ChB FWACP FGCP

Senior Lecturer and Consultant Haematologist,
Department of Haematology, University of
Ghana Medical School and Korle-Bu
Teaching Hospital, Accra, Ghana

Nadia El-Dib, PhD

Professor of Parasitology, Head of the
Permanent Scientific Committee of
Parasitology in Egyptian Universities,
Department of Medical Parasitology, Faculty
of Medicine, Cairo University, Cairo, Egypt

Jeremy Farrar, FRCP DPhil

Professor of Tropical Medicine, Oxford
University Clinical Research Unit, Hospital
for Tropical Diseases, Ho Chi Minh City,
Vietnam

Facundo M. Fernández, PhD

Associate Professor, School of Chemistry and
Biochemistry, Georgia Institute of
Technology, Atlanta, GA, USA

Arthur M. Friedlander, MD

Senior Scientist, US Army Medical Research
Institute of Infectious Diseases, Frederick,
MD, USA, Adjunct Professor of Medicine,
Uniformed Services University of the Health
Sciences, Bethesda, MD, USA

Eduardo Gotuzzo, MD FACP FIDSA

Principal Professor of Medicine, Universidad
Peruana Cayetano Heredia, Director,
Instituto de Medicina Tropical Alexander
von Humboldt, Lima, Peru

Michael D. Green, PhD

Research Chemist, Division of Parasitic
Diseases and Malaria, US Centers for Disease
Control and Prevention, Atlanta, GA, USA

Anthony D. Harries, OBE MA MD FRCP DTM&H

Senior Advisor, Department of Research,
International Union Against Tuberculosis
and Lung Disease, Paris, France

William P. Howlett, FRCPI PhD

Physician/Neurologist, Department of Internal
Medicine, Kilimanjaro Christian Medical
Centre, Moshi, Tanzania

Ralf Ignatius, MD

Head of Diagnostic Laboratory, Institute of
Tropical Medicine and International Health,
Charité – Universitätsmedizin Berlin, Berlin,
Germany

Saythong Inthalad, MD

Luang Nam Tha Provincial Health
Department, Luang Nam Tha Province,
Lao PDR

Kentaro Ishida, MD DTM&H

Obstetrics and Gynecology Resident,
Department of Obstetrics and Gynecology,
Tokyo Metropolitan Bokutoh Hospital,
Tokyo, Japan

Frederique Jacquerioz, MD DTM&H MPH

Visiting Clinical Research Fellow, Instituto de
Medicina Tropical Alexander von Humboldt,
Universidad Peruana Cayetano Heredia,
Lima, Peru, Assistant Clinical Professor,
Department of Tropical Medicine, Tulane
School of Public Health and Tropical
Medicine, New Orleans, LA, USA

Benjamin Jeffs, MRCP

Consultant in Infectious Diseases, Bradford
Royal Infirmary, Yorkshire, UK

Sabine Jordan, MD DTM&H (LSTM)

Senior Physician, Division of Tropical
Medicine and Infectious Diseases,
University of Hamburg School of Medicine,
Hamburg, Germany

Gagandeep Kang, MD PhD FRCPPath

Professor and Head, Division of
Gastrointestinal Sciences, Christian Medical
College, Vellore, India

Juri Katchanov, MD DTMH (BKK)

Specialist in Neurology, Auguste-Viktoria
Klinikum, Department of Infectious Diseases
and Gastroenterology, Berlin, Germany

Valy Keoluangkhhot, MD MSc

Chief of Adult Infectious and Tropical Diseases
Center, Senior Clinical Research, Mahosot
Hospital, Ministry of Health, Vientiane,
Lao PDR, Clinical Coordinator, Institut
Francophone pour la Médecine Tropicale
Vientiane, Lao PDR

Guido Kluxen, MD, Professor Dr. med.

Senior Clinical Research Fellow,
Ophthalmological Regional Community
Consulting, and, Clinic Wermelskirchen–
Solingen–Remscheid, Wermelskirchen,
Germany

Vatthanaphone Latthaphasavang, MD

Senior Clinical Research Fellow, Adult
Infectious Disease Ward, Mahosot Hospital,
Vientiane, Lao PDR

Alejandro Llanos-Cuentas, MD MSc PhD

Full Professor, School of Public Health,
Universidad Peruana Cayetano Heredia,
Lima, Peru

David Mabey, DM FRCP

Professor of Communicable Diseases, Faculty
of Infectious and Tropical Diseases, London
School of Hygiene & Tropical Medicine,
London, UK

Ciro Maguiña, MD

Principal Professor of Medicine, Instituto de
Medicina Tropical, Alexander van Humboldt,
Universidad Peruana Cayetano Heredia,
Lima, Peru

Dalila Martínez, MD MSPH

Associated Investigator, Instituto de Medicina
Tropical Alexander von Humboldt,
Universidad Peruana Cayetano Heredia,
Lima, Peru

Haruhiko Maruyama, MD

Professor, Department of Infectious Diseases,
University of Miyazaki, Faculty of Medicine,
Miyazaki, Japan

Mayfong Mayxay, MD PhD (Clin Trop Med)

Associate Professor of Tropical Medicine and
Infectious Diseases, University of Health
Sciences and Lao-Oxford-Mahosot
Hospital-Wellcome Trust Research Unit,
Mahosot Hospital, Vientiane, Lao PDR

James McCarthy, FRACP

Professor of Tropical Medicine and Infectious
Diseases, Infectious Diseases Program,
QIMR Berghofer Medical Research Institute
and Department of Infectious Diseases,
Royal Brisbane and Women's Hospital,
Brisbane, QLD, Australia

Fernando Mejía Cordero, MD

Associated Clinical Research Fellow, Instituto
de Medicina Tropical Alexander Von
Humboldt, Universidad Peruana Cayetano
Heredia, Lima, Peru

Robert F. Miller, MB BS FRCP FSB

Reader in Clinical Infection, Research
Department of Infection and Population
Health, University College London, London,
UK

**Elizabeth M. Molyneux, OBE MB BS
DObsRCOG FRCPC FRCP FCEM**

Hon Professor of Paediatrics, Paediatric
Department, College of Medicine, Blantyre,
Malawi

Andreas J. Morguet, MD

Senior Cardiology Attending and Lecturer,
Department of Cardiology and Pulmology,
Campus Benjamin Franklin, Charité –
Universitätsmedizin Berlin, Berlin, Germany

Yukifumi Nawa, MD PhD

Consultant/Invited Professor, Research Affairs,
Faculty of Medicine, Khon Kaen University,
Khon Kaen, Thailand

**Paul N. Newton, BM BCh, D.Phil, MRCP,
DTM&H**

Hon Professor, Lao-Oxford-Mahosot
Hospital-Wellcome Trust Research Unit,
Mahosot Hospital, Vientiane, Lao PDR and
Centre for Tropical Medicine, Nuffield
Department of Medicine, Churchill
Hospital, University of Oxford, Oxford, UK

**Caoimhe Nic Fhogartaigh, MBBS MRCP
FRCPath DTM&H**

Infectious Diseases and Microbiology Registrar,
Lao-Oxford-Mahosot Hospital-Wellcome
Trust Research Unit, Mahosot Hospital,
Vientiane, Lao PDR

Buachan Norindr, MD

Deputy, Department of Otorhinolaryngology,
Mahosot Hospital, Vientiane, Lao PDR

Joep J. van Oosterhout, MD PhD

Medical and Research Director, Dignitas
International, Zomba, Malawi

**Gregor Pollach, Dr Med FCAI (Hon)
MA(pol sc) DTM&P**

Head of Department, Associate Professor,
Department of Anaesthesiology and
Intensive Care, University of Malawi,
College of Medicine Blantyre, Malawi

Douglas G. Postels, MD

Associate Professor of Pediatric Neurology,
Department of Neurology and
Ophthalmology, Michigan State University,
East Lansing, MI, USA

Ranjan Premaratna, MD

Professor in Medicine, Department of
Medicine, Faculty of Medicine, University of
Kelaniya, Ragama, Sri Lanka

Sayaphet Rattanaovong, MD

Research Clinician, Lao Oxford Mahosot
Hospital Wellcome Trust Research Unit,
Microbiology Laboratory, Mahosot Hospital,
Vientiane, Lao PDR

Koert Ritmeijer, PhD

Lead Neglected Tropical Diseases, Public
Health Department, Médecins Sans
Frontières, Amsterdam, The Netherlands

**Hillary K. Rono, MBChB MMed
(Ophthalmology) FEACO Msc**

Ophthalmologist, Kitale District Hospital,
Ministry of Health, Kenya, Kitale, Kenya

Karen Roodnat, MD MRCP MSc DTM&H

Medical Doctor in Tropical Medicine and
International Health, Medecins Sans
Frontières, Amsterdam, The Netherlands

Camilla Rothe, MD DTM&H

Clinical Lecturer, Department of Medicine,
Division of Tropical Medicine and Infectious
Diseases, University of Hamburg School of
Medicine, Hamburg, Germany

Carlos Seas, MD

Associate Professor of Medicine, Instituto de
Medicina Tropical Alexander von Humboldt,
Universidad Peruana Cayetano Heredia,
Lima, Peru

Fredericka Sey, MB ChB

Principal Medical Officer, Sickie Cell Clinic,
Ghana Institute of Clinical Genetics, Korle
Bu, Accra, Ghana.

Thomas Schneider, Univ. Prof. PhD MD

Head of Infectious Diseases, Charité –
Universitätsmedizin Berlin, Berlin, Germany

Markus Schulze Schwering, MD FEBO

Lecturer; Consultant Ophthalmologist,
Department of Ophthalmology within the
Department of Surgery, College of Medicine
and Department für Augenheilkunde,
Blantyre, Malawi and, Tübingen, Germany

Omar Siddiqi, MD

Clinical Instructor, Department of Neurology,
Beth Israel Deaconess Medical Center,
Harvard Medical School, Boston, MA, USA,
Honorary Lecturer, Department of Internal
Medicine, University of Zambia School of
Medicine, Lusaka, Zambia

Eberhard Siebert, MD

Staff Neuroradiologist, Department of
Neuroradiology, Charité –
Universitätsmedizin Berlin, Berlin, Germany

Siho Sisouphonh, MD

Senior Infectious Disease Clinician, Adult
Infectious Disease Ward, Mahosot Hospital,
Vientiane, Lao PDR

Günther Slesak, Dr.med., DTM&H

Consultant for Tropical Medicine, Department
for Tropical Medicine, Hospital for Tropical
Diseases Paul-Lechler-Krankenhaus,
Tübingen, Germany

Douangdao Soukaloun, MD

Professor, Department of Pediatrics, Mahosot
Hospital, Vientiane, Lao PDR

M. Leila Srour, MD MPH DTM&H

Professional Development Coordinator,
Pediatrics, Health Frontiers, Muang Sing,
Laos

Hartmut Stocker, MD

Consultant, Auguste-Viktoria Klinikum,
Department of Infectious Diseases and
Gastroenterology, Berlin, Germany

Marija Stojkovic, MD DTM&H

General Practitioner, Section Clinical Tropical
Medicine, University Hospital Heidelberg,
Heidelberg, Germany

Masaki Tomita, MD

Associate professor, Department of Surgery II,
University of Miyazaki, Miyazaki, Japan

Kristien Verdonck, MD PhD

Research Fellow, Department of Public Health,
Institute of Tropical Medicine, Antwerp,
Belgium

Moritz Vogel, Pediatrician DTM&H

Clinical Investigator, Section Clinical Tropical
Medicine, Department of Infectious
Diseases, Heidelberg University Hospital,
Heidelberg, Germany

Emma C. Wall, MRCP DTM&H MRes

Wellcome Trust Clinical PhD Student, Clinical
Research Group, Liverpool School of
Tropical Medicine and the, Malawi–
Liverpool–Wellcome Trust Clinical Research
Programme, Malawi, Africa

Thomas Weitzel, MD DTMP

Consultant in Tropical and Travel Medicine,
Travel Medicine Program, Clínica Alemana,
Universidad del Desarrollo, Santiago, Chile

Christopher J.M. Whitty, FRCP DTM&H

Professor of International Health, London
School of Hygiene & Tropical Medicine,
London, UK

Yohannes W. Woldeamanuel, MD

Postdoctoral Scholar, Department of Neurology
and Neurological Sciences, Stanford
University, School of Medicine, Stanford,
California, Department of Neurology, Addis
Ababa University School of Medicine, Addis
Ababa, Ethiopia

**Katherine L. Woods, MBBS DTMH MSc
MRCP FRCPath**

Infectious Diseases/ Microbiology Registrar,
Infectious Diseases Department, Royal Free
Hospital NHS Trust, London, UK

Mary E. Wright, MD MPH

Division of Clinical Research, National
Institute of Allergy and Infectious Diseases,
National Institutes of Health, Bethesda, MD,
USA

Sophie Yacoub, MRCP MSc DTM&H

Clinical Research Fellow, Centre for Tropical
Medicine, Oxford University Clinical
Research Unit, Wellcome Trust Major
Overseas Programme, Hanoi, Vietnam,
Department of Medicine, Imperial College,
London, UK



ACKNOWLEDGEMENTS

I would like to thank the whole editorial team at Elsevier's for their great and completely uncomplicated cooperation. In particular I would like to thank Poppy Garraway, Belinda Kuhn and Caroline Jones.

I am very grateful to all authors for their spontaneous enthusiasm and their willingness to share their cases.

Special thanks go to Chris Whitty for his continuous support, advice and encouragement, and to Anthony D. Harries, whose own wonderful case book is sadly out of print but was the key inspiration to edit this book. I'd also like to thank David Lalloo and Malcolm Molyneux for their encouragement and support.

Finally I'd like to thank Juri Katchanov for his patience and for being an inexhaustable source of inspiration.

ABBREVIATIONS

ACT: Artemisinin Combination Therapy

A+E: Accident and Emergency

AEC: Absolute eosinophil count

AED: Antiepileptic drugs

AFB: Acid Fast Bacilli

AP: Alkaline Phosphatase

ARDS: Adult respiratory distress syndrome

ART: antiretroviral therapy

ARV: antiretrovirals

bid: twice daily (bis die)

BMA: bone marrow aspirate

BP: Blood pressure

CDC: Centres for Diseases Control and Prevention

CPT: Co-trimoxazole Preventive Therapy

CSF: Cerebrospinal Fluid

CrAg: Cryptococcal antigen

CRP: C-reactive protein

CXR: Chest x-ray

ENT: Ear, nose and throat

ESR: Erythrocyte Sedimentation Rate

FBC: Full Blood Count

FNA: Fine Needle Aspiration

GCS: Glasgow Coma Scale

Hb: Haemoglobin

HCT: Haematocrit

HIV: Human Immunodeficiency Virus

HR: Heart rate

HTLV: Human T-cell Lymphoma Virus

ICP: Intracranial Pressure

IRIS: Immune Reconstitution Inflammatory Syndrome

JVP: Jugular venous pressure

KS: Kaposi's sarcoma

LP: Lumbar Puncture

od: Once daily

PCP: *Pneumocystis jirovecii* Pneumonia

PLT: platelets

PML: Progressive multifocal leukencephalopathy

PPD: Purified Protein Derivative (skin test for *M. tuberculosis* infection)

PR: Pulse rate

RDT: Rapid Diagnostic Test

RR: Respiratory rate

STAT: single dose treatment (lat: *statim* = immediately)

TB: Tuberculosis

tds: three times a day (ter die sumendum)

VDRL: Veneral Disease Research Laboratory (test for syphilis)

VHF: Viral Haemorrhagic Fever

WBC: White Blood Cell Count

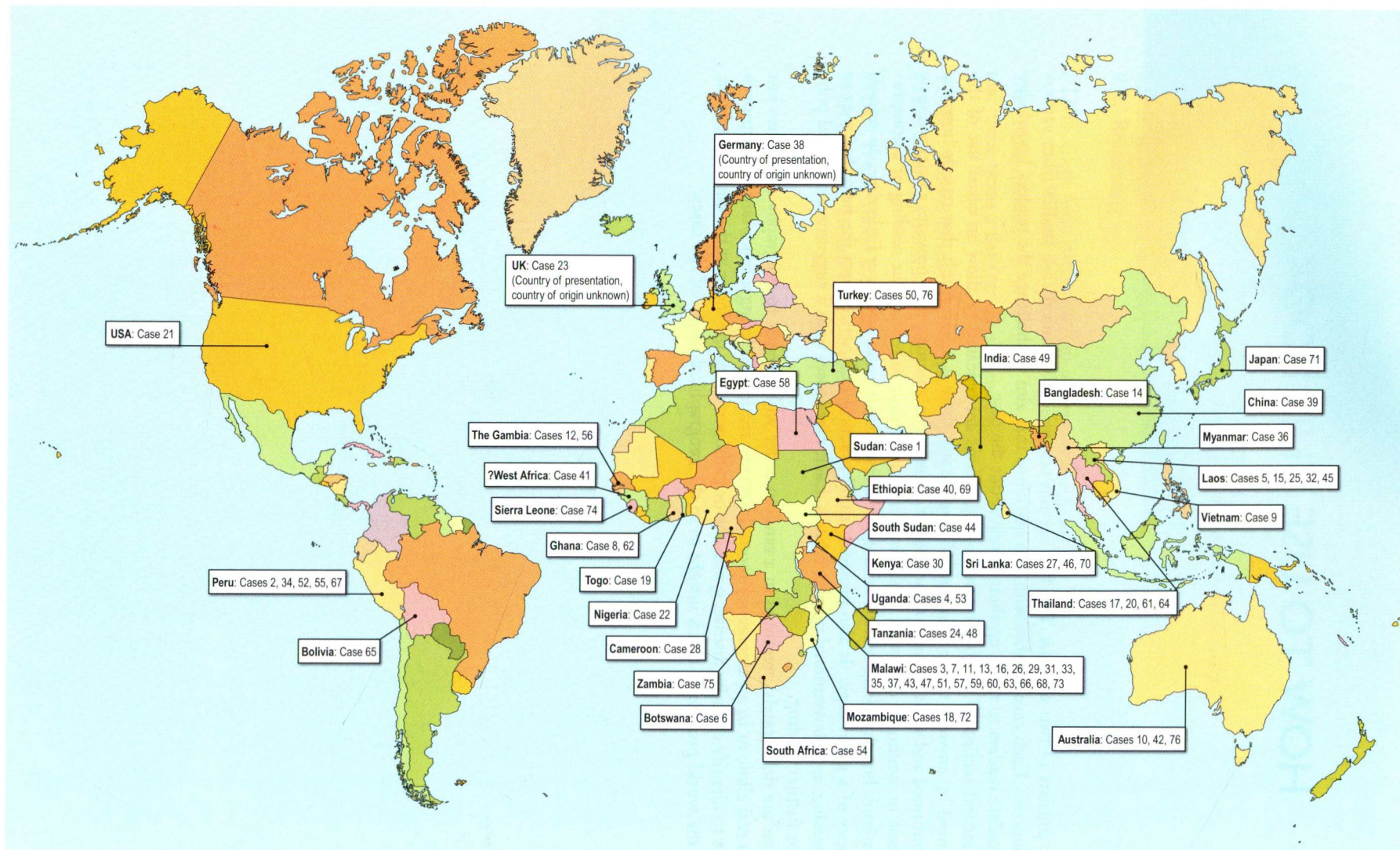
WHO: World Health Organisation

HOW TO USE THIS BOOK

This book consists of two sections. The first section comprises 76 clinical case studies from various tropical countries. Each case finishes with two questions that aim to challenge the readers' knowledge and to stimulate readers to make up their minds about the case.

In the second section of the book cases and questions are repeated to allow an easier use of the book, followed by answers to the questions. Subsequently there is a paragraph that reveals how the real case continued and what became of the patient. Finally, the 'summary box' provides a brief synopsis of the disease or syndrome discussed. This section is not meant to replace the reading of a comprehensive textbook but shall help readers who eg. rehearse for an exam and have little time, to refresh their memory of a given topic. It also provides useful practical experience from the field that may at times be missing in a conventional reference book. Each case closes with a suggestion of useful publications for further reading.

The cases are deliberately presented in a random order with regards to geography or themes just as it is in a real clinic or in an emergency room. However, readers preferring a more targeted approach will be able to identify cases by disease, syndrome or pathogen using the index at the end of the book. A map of the world provides a quick insight as to the geographical origin of the cases.



Cases by Geographical Location