

RAPID INFECTIOUS DISEASES AND TROPICAL MEDICINE

Rachel Isba

Oxford University Medical School,
The John Radcliffe Hospital,
Oxford

EDITORIAL ADVISOR

Brian J. Angus

Clinical Tutor in Medicine,
Honorary Consultant Physician,
Nuffield Department of Medicine,
University of Oxford,
The John Radcliffe Hospital,
Oxford

SERIES EDITOR

Amir Sam

Royal Free and University College Medical School,
University College London,
London



Blackwell
Publishing

For my Mum

© 2004 by Blackwell Publishing Ltd

Blackwell Publishing, Inc., 350 Main Street, Malden, Massachusetts
02148-5020, USA

Blackwell Publishing Ltd, 9600 Garsington Road, Oxford OX4 2DQ, UK
Blackwell Publishing Asia Pty Ltd, 550 Swanston Street, Carlton,
Victoria 3053, Australia

The right of the Author to be identified as the Author of this Work has been asserted in accordance with the Copyright, Designs and Patents Act 1988.

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, except as permitted by the UK Copyright, Designs and Patents Act 1988, without the prior permission of the publisher.

First published 2004

Library of Congress Cataloging-in-Publication Data

Isba, Rachel.

Rapid infectious diseases and tropical medicine / Rachel Isba;
editorial advisor, Brian Angus—1st ed.
p.; cm.—(Rapid series)

Includes bibliographical references.

ISBN 1-4051-1325-1

1. Communicable diseases—Handbooks, manuals, etc. 2. Tropical medicine—Handbooks, manuals, etc.

[DNLM: 1. Communicable Diseases—diagnosis—Handbooks.

2. Communicable Diseases—therapy—Handbooks. 3. Signs and Symptoms—Handbooks. 4. Tropical Medicine—methods—Handbooks. WC 39 176r 2003] I. Title. II. Series.

RC112.I83 2003

616.9—dc22

2003019589

ISBN 1-4051-1325-1

A catalogue record for this title is available from the British Library

Set in 7.5/9.5 pt Frutiger

by Kolam Information Services Pvt. Ltd, Pondicherry, India

Printed and bound in the United Kingdom by

MPG Books Ltd., Bodmin, Cornwall

Commissioning Editor: Vicki Noyes

Editorial Assistant: Nicola Ulyatt

Production Editor: Jonathan Rowley

Production Controller: Kate Charman

For further information on Blackwell Publishing, visit our website:

<http://www.blackwellpublishing.com>.

Foreword, viii

List of Abbreviations, ix

Rapid Series Mnemonic, xii

Part 1: Signs & Symptoms 1

Fever, 3

Sepsis, 3

Cardiovascular, 4

Endocarditis, 4

Myocarditis, 4

Pericarditis, 5

Upper respiratory tract/ENT, 5

Coryza, 5

Croup (acute laryngotracheobronchitis), 5

Epiglottitis, 6

Oral infection, 6

Otitis externa, 6

Otitis media, 6

Pharyngitis/tonsillitis, 7

Sinusitis, 7

Lower respiratory tract, 7

Bronchiolitis, 7

Bronchitis, 8

Cystic fibrosis (infections in), 8

Empyema, 8

Lung abscess, 8

Pneumonia, 8

Gastrointestinal, 9

Colitis, 9

Enteric fever, 9

Food-borne disease, 9

Nausea, vomiting and diarrhoea, 10

Oesophagitis, 10

Peritonitis, 10

Tropical sprue, enteropathy, 11

Whipple's disease, 11

Hepatitis, 11

Acute viral, 11

Chronic viral, 11

Urinary tract infection, 11

Catheter-associated/complicated/renal abscess, 11

Uncomplicated, 11

Haematuria, 11

Sterile pyuria, 12

Genitourinary, 12

- Epididimitis, 12
- Orchitis, 12
- Prostatitis, 12
- Sexually transmitted infections, 12
- Urethritis, 13
- Vulvovaginitis, 13
- Central nervous system, 13**
- Brain abscess, 13
- Encephalitis, 13
- Meningitis, 14
- Neuritis, 14
- Eyes, 14**
- Conjunctivitis, 14
- Endophthalmitis, 15
- Keratitis, 15
- Periocular, 15
- Skin & soft tissue infection, 15**
- Cellulitis, 15
- Lymphadenopathy, 16
- Myositis, 17
- Bone & joint infection, 17**
- Acute arthritis, 17
- Reactive arthritis, 17
- Osteomyelitis, 18
- Immunocompromised host, 18**
- Acquired immune deficiency syndrome, 18
- Alcohol abuse, 18
- Malnutrition, 18
- Neonates, 19
- Neutropaenia, 19
- Pregnancy, 19
- Splenectomy, 19

Part 2: Aetiological Agents, 21

- Viruses, 23
- Bacteria, 24
- Mycobacteria, 25
- Fungi, 25
- Protozoa, 26
- Helminths, 26
- Spirochaetes, 27
- Other organisms, 27
- Higher organisms, 27
- Ectoparasites, 27

Part 3: Diseases, 29

- Notifiable diseases, 30
- Actinomycosis, 31
- Adenoviruses, 32
- Alphaviruses, 33
- Amoebiasis, 34
- Anaerobes, 35
- Anthrax, 36
- Aspergillosis, 37
- Atypical mycobacteria, 38
- Babesiosis, 39
- Bacillus cereus*, 40
- Bacterial vaginosis, 41
- Bartonellosis, 42
- Blastomycosis, 43
- Botulism, 44
- Brucellosis, 45
- Campylobacter jejuni*, 46
- Candidiasis, 47
- Capnocytophaga*, 48
- Chickenpox & Shingles, 49
- Chlamydiae*, 50
- Cholera, 51
- Coccidiomycosis, 52
- Common cold, 53
- Coxsackie & Echoviruses, 54
- Cryptococcosis, 55
- Cryptosporidium*, *Cyclospora*, *Isospora*, *Microspora*, 56
- Dengue, 57
- Dermatophytes, 58
- Diphtheria, 59
- Ectoparasites, 60
- Ehrlichiosis, 61
- Filariasis, Dracunculiasis, Trichinosis, 62
- Gangrene, 64
- Giardia, 65
- Glandular fever, 66
- Gonorrhoea, 67
- Gram-negative bacteria, 68
- Haemolytic uraemic syndrome, 69
- Haemophilus* spp., 70
- Hantaviruses, 71
- Helicobacter pylori*, 72
- Hepatitis A, 73
- Hepatitis B & D, 74
- Hepatitis C, 75
- Hepatitis E, 76

Herpesviruses, 77
Histoplasmosis, 78
HIV 1 & 2, 79
HTLV 1 & 2, 80
Influenza & parainfluenza viruses, 81
Japanese B encephalitis, 82
Legionellosis, 83
Leishmaniasis, 84
Leprosy, 85
Leptospirosis, 86
Listeriosis, 87
Lyme disease, 88
Malaria, 89
Measles, 90
Meningococcus, 91
Molluscum contagiosum, 92
Mucormycosis, 93
Mumps, 94
<i>Mycoplasma</i> spp., 95
Nocardiosis, 96
Papillomavirus, 97
Parvovirus B19, 98
<i>Pasteurella</i> , 99
Plague, 100
<i>Pneumocystis carinii</i> , 101
Poliomyelitis, 102
Polyomaviruses, 103
Prions, 104
<i>Pseudomonas aeruginosa</i> , 105
Q fever, 106
Rabies, 107
Rat-bite fevers, 108
Respiratory syncytial virus, 109
Roundworms (intestinal), 110
Rubella, 111
Salmonellosis (non-typhoid), 112
Schistosomiasis, 113
Scrub typhus, 114
Shigellosis, 115
Smallpox, 116
Sporotrichosis, 117
Spotted fevers, 118
<i>Staphylococcus</i> spp., 119
<i>Streptococcus</i> spp., 121
Syphilis, 123
Tapeworms, 124
Tetanus, 125

Tick-borne encephalitis, 126
Toxoplasmosis, 127
Treponematosiis, 128
Trichomoniasis, 129
Trypanosomiasis, 130
Tuberculosis, 131
Tularaemia, 133
Typhoid & paratyphoid, 134
Viral gastroenteritis, 135
Viral haemorrhagic fevers, 136
Visceral larva migrans, 137
Whooping cough, 138
Yellow fever, 139
Yersiniosis, 140

Appendices, 141

Immunisations and Malaria Prophylaxis & Treatment, 143

Vaccines, 143
Anthrax, 143
Diphtheria, 143
Haemophilus influenzae b, 144
Hepatitis A, 144
Hepatitis B, 144
Influenza A & B, 145
Japanese B encephalitis, 145
Measles, 146
Meningococcus, 146
MenC, 147
Mumps, 147
Pertussis, 148
Pneumococcus, 148
Polio, 149
Rabies, 149
Rubella, 150
Tetanus, 150
Tuberculosis, 151
Typhoid, 151
Yellow fever, 152
Vaccination schedules, 153
Malaria prophylaxis, 154
Malaria treatment, 155
Antibiotics (Therapy & Prophylaxis) and Needlestick Prophylaxis, 157

Sources and Further Reading, 167

Rapid Infectious Diseases and Tropical Medicine has been written by an Oxford University clinical medical student partly while she was travelling in the South Atlantic but mainly as part of her special study module on medical publishing. I can think of no better way to study medical publishing than by publishing a book!

There are many reasons that nowadays the student of general medicine needs a book like this. The growth in rapid worldwide travel has meant that many previously geographically obscure infections are now rapidly at our doorstep and in our clinics. The spectre of bioterrorism has meant that we now need to be vigilant to unusual and exotic infection and the growth of the multi-drug resistant organisms within a hospital environment increasingly populated with immunocompromised patients has meant that rapid identification and control of infection is essential. Even the tabloid press now regularly feature articles about MRSA, the superbug!

This book aims to allow the rapid identification of the key features of infectious diseases organised in a simple and easily accessible way. It also should help clarify communication between the laboratory and the ward as it is organised in such a way that either the organism itself or the disease it causes can be searched for.

This will be a valuable resource for undergraduates revising for final BM as well as postgraduates revising for MRCP and MRCPPath. Although common in clinical practise, infection is not a usual clinical scenario in exams for obvious reasons but tends to be well represented in written papers. We hope that you will find this book useful.

Brian Angus

Ab	Antibody	CSF	CerebroSpinal Fluid
ABPA	Allergic BronchoPulmonary Aspergillosis	CT	Computerised Tomography
ACh	AcetylCholine	CTF	Colorado Tick Fever
AFB	Acid-Fast Bacilli	CV	CardioVascular
Ag	Antigen	CXR	Chest X-Ray
AIDS	Acquired Immune Deficiency Syndrome	DEN	DENgue
ALT	ALanine Transaminase	DF	Dengue Fever
ANS	Autonomic Nervous System	DHF	Dengue Haemorrhagic Fever
APTT	Activated Partial Thromboplastin Time	DIC	Disseminated Intravascular Coagulation
ARDS	Adult Respiratory Distress Syndrome	DNA	DeoxyriboNucleic Acid
ARF	Acute Renal Failure	DOTS	Directly Observed Treatment Short course
AST	ASpartate Transaminase	DSS	Dengue Shock Syndrome
ATLL	Adult T-cell Leukaemia/ Lymphoma	DTP	Diphtheria Tetanus Pertussis (vaccine)
ATN	Acute Tubular Necrosis	DTwP	Diphtheria Tetanus whole-cell Pertussis (vaccine)
AXR	Abdominal X-Ray	EBV	Epstein-Barr Virus
BAL	BronchoAlveolar Lavage	ECG	ElectroCardioGram
BCG	Bacille Calmette-Guérin	EEE	Eastern Equine Encephalitis
C.	Central	EEG	ElectroEncephaloGram
CAH	Chronic Active Hepatitis	ELISA	Enzyme-Linked ImmunoSorbent Assay
cAMP	cyclic Adenosine MonoPhosphate	EM	Electron Microscope
CAPD	Continuous Ambulatory Peritoneal Dialysis	ENL	Erythema Nodosum Leprosum
CD4+	Cluster of Differentiation 4 positive	ENT	Ear Nose Throat
CF	Cystic Fibrosis	EPI	Expanded Programme of Immunisation
CF	Complement Fixation	ERCP	Endoscopic Retrograde Cholangio Pancreatography
CFS	Chronic Fatigue Syndrome	ESR	Erythrocyte Sedimentation Rate
CHF	Chronic Heart Failure	ETBE	European Tick-Borne Encephalitis
CHIK	CHIKungunya	FBC	Full Blood Count
CIN	Cervical Intraepithelial Neoplasia	FTA	Fluorescent Treponemal Antibody
CJD	Creutzfeldt-Jakob Disease	G +ve	Gram stain positive
CK	Creatine Kinase	G -ve	Gram stain negative
CMI	Cell-Mediated Immunity	GBS	Guillain-Barré Syndrome
CMV	CytoMegalovirus	GH	Growth Hormone
CNS	Central Nervous System	GIT	GastroIntestinal Tract
COPD	Chronic Obstructive Pulmonary Disease	GU	GenitoUrinary
CPH	Chronic Persistent Hepatitis		
CRP	C-Reactive Protein		

List of Abbreviations

H	Haemagglutinin	LCMV	Lymphocytic ChorioMeningitis Virus
H & E	Haematoxylin & Eosin	LDH	Lactate DeHydrogenase
HACEK	Haemophilus Actinobacillus Cardiobacterium Eikenella Kingella	LFT	Liver Function Tests
HAV	Hepatitis A Virus	LRTI	Lower Respiratory Tract Infection
Hb	Haemoglobin	mAb	monoclonal Antibody
HB	Hepatitis B (vaccine)	MACELISA	IgM Antibody Capture ELISA
HBV	Hepatitis B Virus	MALToma	Mucosa-Associated Lymphoid Tissue-oma
HBVeAg	Hepatitis B Virus envelope Antigen	MCV	Mean Cell Volume
HBVsAg	Hepatitis B Virus surface Antigen	MDRTB	MultiDrug Resistant TuBerculosis
HCV	Hepatitis C Virus	MMR	Measles Mumps Rubella (vaccine)
HDV	Hepatitis D Virus	MRI	Magnetic Resonance Imaging
HEV	Hepatitis E Virus	MRSA	Methicillin-Resistant Staphylococcus Aureus
HHV	Human Herpes Virus	MSU	MidStream Urine
Hib	Haemophilus influenzae b (vaccine)	N	Neuraminidase
HIV	Human Immunodeficiency Virus	N.	North
HLA-B27	Human Lymphocyte Antigen B27	Na	Sodium
HPV	Human Papilloma Virus	NGU	Non-Gonococcal Urethritis
HSV	Herpes Simplex Virus	nvCJD	new variant Creutzfeldt-Jakob Diseases
HTLV	Human T-cell Leukaemia Virus	N.W.	North West
HUS	Haemolytic Uraemic Syndrome	N.W.	New World
HVB	Herpes Virus B	OCP	Oral Contraceptive Pill
HZV	Herpes Zoster Virus	OPV	Oral Polio Vaccine
IBS	Irritable Bowel Syndrome	OT	Occupational Therapy
ID	IntraDermal	O.W.	Old World
IFA	ImmunoFluorescence Assay	PCR	Polymerase Chain Reaction
IFN	InterFeroN	PEP	Post-Exposure Prophylaxis
Ig	Immunoglobulin	PID	Pelvic Inflammatory Disease
IM	IntraMuscular	PGL	Persistent Generalised Lymphadenopathy
IP	Incubation Period	PMN	PolyMorphoNucleocyte
IPV	Inactivated Polio Vaccine	PO	Per Os
ITU	Intensive Treatment Unit	PPI	Proton Pump Inhibitor
IU	International Units	PUD	Peptic Ulcer Disease
IUCD	IntraUterine Contraceptive Device	PV	Per Vaginum
IV	IntraVenous	RBC	Red Blood Count
IVDA	IntraVenous Drug Abuse	RhF	Rheumatic Fever
JBE	Japanese B Encephalitis	RIF	Right Iliac Fossa
JCV	Jamestown Canyon virus		

RMSF	Rocky Mountain Spotted Fever	URTI	Upper Respiratory Tract Infection
RNA	RiboNucleic Acid	USS	UltraSound Scan
RSSE	Russian Spring–Summer Encephalitis	UTI	Urinary Tract Infection
RSV	Respiratory Syncytial Virus	VDRL	Venereal Disease Research Laboratory
RT	Reverse Transcriptase	VEE	Venezuelan Equine Encephalitis
°S	degrees South	VHF	Viral Haemorrhagic Fever
S.	South	ViCPS	typhoid Purified PolySaccharide (vaccine)
SARS	Severe Acute Respiratory Syndrome	VZV	Varicella Zoster Virus
SC	SubCutaneous	W.	West
SCID	Severe Combined ImmunoDeficiency	WBC	White Blood Count
SDH	SubDural Haematoma	WEE	Western Equine Encephalitis
S.E.	South East	WNV	West Nile Virus
SIADH	Syndrome of Inappropriate AntiDiuretic Hormone secretion	XR	X-Ray
SF	Scarlet Fever	YF	Yellow Fever
SOB	Short Of Breath	Z–N	Ziehl–Neelsen
SOL	Space-Occupying Lesion	/24	hours
spp.	species	/7	days
SRSV	Small Round Structured Virus	/52	weeks
SSA	Sub-Saharan Africa	/12	months
SSSS	Staphylococcal Scalded Skin Syndrome	1°	primary
STSS	Streptococcal Toxic Shock Syndrome	2°	secondary
STI	Sexually Transmitted Infection	3°	tertiary
TB	TuBerculosis	4°	quaternary
TFP	Tropical Flaccid Paralysis	♀	female
TPHA	Treponema Pallidum HaemAgglutination	♂	male
TSP	Tropical Spastic Paraparesis	↑	increased
TSS	Toxic Shock Syndrome	↓	decreased
TT	Tetanus Toxoid (vaccine)	→	goes to
U & E	Urea & Electrolytes	↕	goes both ways
		/	or
		>	greater than
		<	less than
		≥	greater than or equal to
		≤	less than or equal to
		≫	much greater than
		≪	much less than

Rapid Series Mnemonic

D:	Definition	<i>Doctors</i>
A:	Aetiology	<i>Are</i>
A/R:	Associations/Risk factors	<i>Always</i>
E:	Epidemiology	<i>Emphasising</i>
H:	History	<i>History-taking &</i>
E:	Examination	<i>Examining</i>
P:	Pathology	<i>Patients</i>
I:	Investigations	<i>In</i>
M:	Management	<i>Managing</i>
C:	Complications	<i>Clinical</i>
P:	Prognosis	<i>Problems</i>

**PART 1:
SIGNS
&
SYMPTOMS**

Fever

Viruses

Dengue

EBV

Hepatitis (prodromal)

HIV

Influenza

Viral haemorrhagic fevers (Ebola, Lassa, Marburg, etc.)

Yellow fever

Bacteria

Borrelia sp.

Brucella sp.

Coxiella burnetii (Q fever)

Francisella tularensis (tularemia)

Legionella pneumophila

Salmonella paratyphi

Salmonella typhi

Streptococcus spp.

Yersinia pestis

Mycobacteria

Mycobacterium tuberculosis

Fungi

Coccidioides immitis

Histoplasma spp.

Protozoa

Entamoeba histolytica

Leishmania spp.

Plasmodium spp.

Trypanosoma spp.

Helminths

Hyperinfection syndromes

Spirochaetes

Leptospira interrogans (Weil's disease)

Other organisms

Rickettsia spp.

Sepsis

Bacteria

Almost any, but particularly

Enterobacter spp.

Enterococcus spp.

Escherichia coli

Klebsiella spp.

Listeria monocytogenes

Neisseria meningitidis

Pseudomonas aeruginosa

Salmonella spp.

Staphylococcus aureus

Streptococcus faecalis
Streptococcus pneumoniae
Streptococcus pyogenes A–T

Mycobacteria
Mycobacterium tuberculosis

Fungi
Candida spp.

Cardiovascular

Endocarditis

Native valve

Bacteria
HACEK
Staphylococcus aureus
Streptococcus viridans

Other organisms
Chlamydia spp.
Coxiella burnetii
Mycoplasma spp.

Prosthetic valve

Bacteria
Coliform
Enterococcus spp.
Staphylococcus aureus
Staphylococcus epidermidis

Fungi
Candida spp.

IV drug abusers

Bacteria
Coliform
Enterococcus faecalis
Pseudomonas aeruginosa
Staphylococcus aureus

Fungi
Candida spp.

Myocarditis

Viruses
Adenovirus
CMV
Coxsackie A & B
EBV
Echovirus
HIV
Influenza
Mumps

Bacteria

Borrelia (Lyme disease)
Corynebacterium diphtheriae
Neisseria meningitidis
Staphylococcus aureus

Mycobacteria

Mycobacterium tuberculosis

Fungi

Candida spp.

Protozoa

Toxoplasma gondii
Trypanosoma cruzi

Helminths

Trichinosis

Other organisms

Coxiella burnetii
Chlamydia psittaci

Pericarditis**Viruses**

Adenovirus
Coxsackie
Echovirus
EBV
Influenza
Mumps

Bacteria

Staphylococcus aureus
Streptococcus pneumoniae
Streptococcus pyogenes

Mycobacteria

Mycobacterium tuberculosis

Fungi

Histoplasma

Protozoa

Entamoeba histolytica

Upper respiratory tract/ENT**Coryza****Viruses**

Coronavirus
Rhinovirus

Croup (acute laryngotracheobronchitis)**Viruses**

Adenovirus