RAPID INFECTIOUS DISEASES AND TROPICAL MEDICINE

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Foreword

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

List of Abbreviations

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

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

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

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 (tularaemia)
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