

Clinical Microbiology and Infectious Diseases

AN ILLUSTRATED COLOUR TEXT | §

EDITION

W. John Spicer



Contents

Preface to the second edition v Preface to the first edition v Acknowledgements vi Microbial names changed from the first edition ix Abbreviations ix

Characteristics of bacteria 2

Characteristics of fungi 6

Characteristics of protozoa 10

Characteristics of multicellular

parasites 12

Characteristics of viruses 14

Uneasy peace: host-microbial

relationships 20

a dare conarest

Attackers: normal flora and

pathogens 22

Attack begins: attack and first-line

defences 24

Attack continues: non-specific second-line defences 26

Attack contained: specific immune

defences 28

Defences disordered or evaded 30 Defences disturbed: general host

responses 32

Specific pathogens 34

Bacteria 34

Staphylococci 34

Streptococci and enterococci 36

Gram-positive rods: Corynebacterium,

Listeria, Bacillus 38

Clostridia 40

Neisseria, Moraxella, Kingella and

Acinetobacter 42

Haemophilus, Bordetella and

Legionella 44

Enterobacteriaceae 46

Vibrio, Campylobacter, Helicobacter,

Aeromonas, Plesiomonas 50

Pseudomonads and rare Gram-negative

rods 52

Bacteroides, Fusobacterium and other

anaerobes 54

Zoonotic bacteria 56

Spirochaetes: treponemes, borreliae,

leptospires 58

Mycobacteria 60

Actinomyces, Nocardia and rare

Gram-positive bacilli 62

Mycoplasma and Ureaplasma 63

Chlamydia and Chlamydophila 64

Rickettsiae and bartonellae 66

Fungi 68

Aspergillus and Candida 68

Cryptococcus and Histoplasma 70

Blastomyces, Coccidioides, Paracoccidioides 72

Fungi infecting skin and adjacent

tissues 74

Fungi causing invasive zygomycosis (mucormycosis) 76

Arthropods 77

Arthropods 77

Parasites 78

Sporozoa: Plasmodium, Toxoplasma,

Cryptosporidium 78

Amoebae: Entamoeba, Naegleria,

Acanthamoeba 80

Intestinal and vaginal flagellates and

ciliates 81

Blood and tissue flagellates 82

Intestinal nematodes (worms) 84

Tissue nematodes (worms) 86 Cestodes (tapeworms) 88

Trematodes (flukes) 90

Viruses 92

Microbial affack succeeds clinical infection 94

Acute meningitis 94

Acute encephalitis and polio 96

Chronic diffuse non-viral CNS

infections 98

Chronic diffuse viral and prion CNS

diseases 100

CNS abscesses and other focal

infections 102

Nervous system: tropical and rare

infections 104

Otitis, mastoiditis and sinusitis 106

Superficial ocular infections 108

Tropical ocular infections 110

Deep eye infections 112

Stomatitis 113

Dental and periodontal infections 114

Viral respiratory infections 116

Throat infections 118

Epiglottitis, diphtheria and

Ludwig's angina 120

Tropical and rare oro-facial

infections 122

Laryngitis, tracheitis and pertussis 123

Bronchial infections 124

Pneumonia I: in the normal host 126

Pneumonia II: in the abnormal host 128

Lung abscess and empyaema 130

Tuberculosis and atypical mycobacterial

infections 132

Tropical or rare respiratory

infections 134

Suppurative thrombophlebitis/

lymphangitis/lymphadenitis 136

Myocarditis, pericarditis and rheumatic fever 138

Infective endocarditis 140

Bacteraemia, septicaemia and

fungaemia 142

Viral systemic infections of the

young **144**

Viral systemic infections of all

ages 146

HIV and AIDS 149

Tropical systemic infections 152

Rarer systemic infections 154

Pyrexia of unknown origin

(PUO) 156

Diarrhoeal disease I: general

features 158

Diarrhoeal disease II: bacteria and

viruses 160

Diarrhoeal disease III: protozoa and

worms 162

Peritonitis and intra-abdominal

abscesses 164

Biliary infections 166

Hepatic non-viral infections 168

Viral hepatitis 170

Tropical and rare abdominal

infections 173

Urinary tract infections: cystitis and

pyelonephritis 174

Renal and perinephric abscesses/

prostatitis 176

Tropical and rare urinary infections 178

Urethritis 180

Cervical infections 182

Salpingitis and pelvic inflammatory

disease 184

Epididymitis, orchitis and balanitis 186

Vaginitis and vulvo-vaginitis 187

Tropical and rare sexually transmitted

diseases 188

Streptococcal skin and soft tissue

infections 190

Staphylococcal skin and soft tissue

infections 192

Gas-forming and gangrenous

infections 194

Wound, bite and burn infections 196

Fungal infections of the skin, hair or

nails 198

Viral infections of skin, mucosa and soft

tissues 200

Tropical and rare bacterial skin and soft

tissue infections 202

Tropical and rare fungal and parasitic

skin and soft tissue infections 204

Osteomyelitis 206

Special, tropical or rare bone

infections 208

Joint infections 210

Zoonoses 212

Maternal, fetal and neonatal

infections 214

Travellers and recent immigrants 216

Hospital-acquired infections 218

Infections in compromised patients 220

Infections in General Practice

patients 222

Infections in elderly patients 223

Microbe control by extrinsic defences 224

Sterilisation and disinfection **224**Antimicrobials: general properties **226**Antimicrobials: specific antibacterials **228**

Antimicrobials: special antimicrobials 232

Antimicrobials: antiviral drugs 234 Vaccines and immunisation 236

Clinician and laboratory: microbial detection and identification 238
Clinician and laboratory: antibody response and guiding therapy 240