

Contents

Preface xiii

PART 1: INTRODUCTION 1

The nature of the practice of infectious diseases 1
Components of a diagnosis 1
Microbiological diagnosis 2
Risk factors for infection 2
Methods for making a microbiological diagnosis 3
Principles of management of patients with infectious diseases 5
Principles of choosing antimicrobial therapy 8
Principles of addressing public health interests 10

PART 2: CLINICAL CASE EXERCISES 12

1. A teenage girl with nausea and abdominal pain 12
2. An 18-month-old child with fever, cough, and red eyes 17
3. An infant with runny nose, cough, and rapid breathing 24
4. A neonate with fever and cerebrospinal fluid pleocytosis 26
5. A 5-year-old boy with a limp 30
6. A teenage boy with sore throat and fever 34
7. A teenage boy with fever, headache, and bleeding 39
8. A teenage boy with agitation and altered level of consciousness 42

viii Contents

- 9. A 6-year-old girl with a rash 44
- 10. A 12-year-old girl with fever and rapid breathing after renal transplantation 55
- 11. A 4-year-old boy with fever after heart surgery 58
- 12. A 6-year-old girl with sickle cell disease and worsening anemia 59
- 13. A 5-year-old girl with walking difficulty and speech deterioration 61
- 14. A 6-month-old boy with poor feeding, fever, and lethargy 63
- 15. A 2-year-old boy with recurrent hospitalizations for fever and cough 67
- 16. A neonate with a rash 69
- 17. A 6-year-old girl with weakness and muscle pain 72
- 18. A 48-year-old man with fever and multiorgan failure 75
- 19. A 6-month-old boy with diarrhea and fever 77
- 20. An 18-month-old girl with fever and a rash 87
- 21. A neonate with eye discharge 92
- 22. A 9-year-old boy with joint pain and swelling 94
- 23. A 3-year-old boy with eyelid swelling 97
- 24. A 6-year-old boy with fever and sore throat 99
- 25. A premature neonate with skin spots and ankle swelling 101
- 26. A 3-year-old boy with fever, confusion, and a rash 104
- 27. A 6-month-old girl with fever and altered level of consciousness 105
- 28. A neonate with failure to use one limb 110
- 29. A 6-month-old child with a ventriculoperitoneal shunt and fever 112
- 30. A 1-day-old infant with respiratory distress and shock 112
- 31. An 8-month-old infant with fever and shock 114
- 32. An infant, recovering from pneumonia, with a facial abnormality 117
- 33. A picture of an abnormal 5-day-old infant 119
- 34. A 10-year-old girl with a sore throat after returning to the United States from Odessa 120
- 35. A 2-week-old neonate with fever and altered mental status 123
- 36. A 5-year-old girl with recurrent episodes of fever, cough, and chest pain 124
- 37. An 8-year-old boy with cough, chest pain, and fever after bone marrow transplantation 125
- 38. A 4-month-old infant with constipation and floppiness 127

39. A 15-year-old Turkish shepherd with a sore on his arm 130

40. A 10-year-old girl with previous severe infections, presenting with leg swelling and pain 131

41. Pictures of several infants 0–3 months old with the same diagnosis 133

42. A 13-year-old boy with repeated episodes of fever 137

43. A triathlete with fever and headache 139

44. A 13-year-old boy with knee pain 141

45. A 12-year-old girl with abdominal pain 143

46. An 18-month-old boy with fever and rash 146

47. A 24-year-old man with headache, fever, and rash 149

48. A 13-year-old girl with eye pain 151

49. An 18-month-old boy with a limp and fever 153

50. A 3-year-old South African boy with fever and abdominal pain 154

51. A 1-month-old infant with jaundice 157

52. A 12-year-old girl with fever and abdominal pain 158

53. A 16-year-old boy with a bad cough 159

54. A 10-year-old boy with fever and an axillary swelling 162

55. A 6-month-old infant with fever and irritability 163

56. A 12-year-old boy who develops fever and hypotension while in the intensive care unit 165

57. A 10-year-old girl with recurrent episodes of pneumonia 166

58. A 4-year-old boy with fever and diarrhea 168

59. A 2-year-old boy with fever and purple skin lesions 171

60. A 13-year-old boy with thalassemia, presenting with fever and hypotension 172

61. A 3-old boy with fever for 1 month and abdominal tenderness 174

62. A physician with abdominal discomfort and diarrhea 177

63. A 6-year-old boy with fever 181

64. An 18-year-old hunter with fever and lymphadenopathy 189

65. A 4-month-old infant with strabismus and developmental delay 191

66. An 8-year-old girl with seizures 194

67. A 10-year-old boy with hematuria 198

68. A 3-year-old girl with respiratory difficulty and fever 202

x Contents

69. A 16-year-old Mexican boy with fatigue 203

70. A 6-year-old Liberian girl with a cutaneous “cyst” 205

71. An 18-month-old boy with a worm 207

72. A 2-year-old boy with altered mental status 209

73. An 18-month-old child, receiving treatment for tuberculosis, with respiratory difficulty 215

74. An 11-year-old boy with AIDS, presenting with weight loss and fever 220

75. A 2-year-old boy with suspected tuberculosis 223

76. A 12-year-old boy with long-standing neck pain 225

77. An 18-month-old boy with fever, rash, and red eyes 228

78. A 5-year-old boy with shortness of breath 231

79. An 8-year-old boy with fever, cough, weight loss, and fatigue 233

80. A 9-year-old boy with a neck swelling 237

81. A 10-month-old boy, hospitalized for kwashiorkor, who develops fever 240

82. A 2-year-old boy with AIDS and skin lesions 242

83. A toddler with fever and abdominal pain 244

84. A 2-year-old girl with cough and fever 246

85. An 18-month-old girl with fever and vomiting 253

86. An 11-year-old boy with fever, headache, and confusion 255

87. A 6-year-old South African boy with fever, abdominal pain, and pallor 257

88. An 18-month-old girl with fever and neck swelling 260

89. A 17-year-old boy with back pain, incontinence, and leg weakness 262

90. An 18-month-old girl with fever and inability to move her neck 263

91. A 2-year-old boy with fever and a limp 266

92. A neonate with petechiae and hepatosplenomegaly 268

93. An 18-month-old boy with fever, respiratory difficulty, and grunting 269

94. A 5-year-old boy with unilateral facial swelling 271

95. A 2-year-old girl with abdominal pain and refusal to walk 273

96. An 8-month-old infant with meningitis refractory to therapy 274

97. A 10-year-old boy with progressive infection 275

98. A 17-year-old girl with development of renal failure during treatment for a vascular catheter infection 277

99a. A 3-year-old boy with a ventriculoperitoneal shunt infection who develops a seizure 278

99b. A 10-year-old boy with asthma who develops a seizure 279

99c. A 17-year-old girl with tuberculosis, presenting with nausea and vomiting 279

100. An 11-year-old Mexican girl with a painful, swollen knee 281

101. A very ill neonate with abdominal distension 284

102. A 6-year-old South African shepherdess with abdominal discomfort 287

103. A 9-year-old girl with fever, rash, and joint pain 291

104. A 21-year-old woman with fever, shock, and skin lesions 293

105. A 17-year-old boy with fever, rash, and headache after a South African safari 300

106. A 10-year-old girl with a skin problem 303

107. A 5-year-old girl with recurrent episodes of fever 304

108. A 14-year-old boy with fever and hip pain 305

109. A 10-year-old boy with abdominal pain during treatment for meningitis 308

110. A 4-year-old boy with autoimmune lymphoproliferative disorder who develops a sore throat 310

111. A 16-year-old boy with fever, headache, muscle aches, and weakness 311

112. A 4-year-old boy with an eye injury complicated by infection 313

113. A 12-year-old boy with nephrotic syndrome who develops abdominal pain and fever 315

114. An 18-month-old girl with stridor 316

115. A 15-year-old girl with abdominal pain 319

116. A 12-year-old boy with fever, cough, and pallor 323

117. A 6-year-old girl with meningitis 325

118. A 13-year-old girl with fever, headache, and depressed level of consciousness 326

119. A 12-year-old girl, living in a rural area, with fever and respiratory difficulty 329

120. A 12-year-old boy with a sore throat, fever, and poor perfusion 331

121. A 6-year-old girl, being treated for an epidural abscess, with persistent fever 334

xii Contents

[PART 3: APPENDIX](#) 336

Table A1. Infectious diseases reportable in the United States 336

Table A2. Taxonomy of human pathogens, their usual sources, and the main clinical syndromes they cause 337

List 1. Animate and inanimate sources and infectious agents associated with them 351

Table A3. Arthropods as vectors of infectious agents 352

General References 354

Index 355