Contents

1. **Poisoning: Evaluation and treatment** 1
   General considerations: Introduction and terminology 1; Epidemiology 4; Pharmacologic concepts 4; Evaluation of poisoning or drug overdosage 5; Poisoning and overdosage–clinical signs 9; Laboratory investigations 13; Airway assessment 18; To initiate advanced life support 18; Use of MDAC for toxins with known or potential enhanced elimination 24; Urinary alkalinization 24

2. **Cholinergic agents poisoning** 30
   Mechanism of action 30; Sources 30; Pharmacodynamics 31; Clinical manifestation and diagnosis 31; Laboratory investigations 32; Differential diagnosis 33; Clinical course 33; Management 33; Antidote 34; Effects of cholinergic poisoning 35; Treatment for organophosphorus toxicity 35

3. **Acetaminophen poisoning** 38
   Pharmacology 38; Clinical manifestations 38; Diagnosis 39; Management 40

4. **Antiarrhythmic poisoning** 44
   Actions of antiarrhythmic drugs 44; General management 44

5. **Alcohols and glycols** 47
   Acute ethanol intoxication 47; Alcoholic ketoacidosis 48; Clinical presentation 48; Ethylene glycol 48; Methanol 49

6. Anticholinergic poisoning **53**
Pharmacology, clinical presentation and diagnosis 53; Evaluation and treatment 54

7. Anticonvulsant toxicity **55**
Phenytoin 55; Valproic acid 55; Carbamazepine 56; Antidotal treatment 57; Newer anticonvulsants 57

8. Beta blocker poisoning **59**
Toxicity 59; Beta blocker overdosage 60; Acute MI in beta blocker overdosage 61; Beta blocker toxicity causing bradycardia and hypotension 61

9. Calcium channel blocker poisoning **64**
Clinical manifestation 64; Diagnosis 64; Management 64; Newer antidotes 65; Calcium channel blocker poisoning–ventricular tachycardia 66

10. Cocaine poisoning **67**
Diagnosis 67; Laboratory tests 68; Treatment 68

11. Corrosive poisoning **69**
Effects 69; Toxicity 69; Treatment 70; Strong alkali poisoning 71; Acid poisoning 71

12. Cyclic antidepressant poisoning **76**
Selective serotonergic reuptake inhibitors 76; Management 77

13. Digitalis poisoning **79**
Clinical manifestations 79; Diagnosis of toxicity 80; Management 80

14. Envenomations **81**
Snake identification 81; Pit viper venom poisoning 82; Diagnostic evaluation 82; ELISA testing for snake bite 82; Management 83; Antivenom 83; Scorpion venom poisoning 89

15. Hydrofluoric acid poisoning **101**
Management 101

16. Hydrocarbons **103**
Petroleum distillates 103; Management 104; Halogenated hydrocarbons 104; Aromatic hydrocarbons 104; Aliphatic hydrocarbons 105

17. Iron poisoning **106**
Toxicity 106; Management 107

18. Isoniazid poisoning **109**
Clinical presentation 109; Diagnosis of toxicity 110; Management 110

19. Lithium poisoning **111**
Diagnosis 111; Management 112

20. Methylxanthines **113**
Toxicity 113; Laboratory assessment 113; Management 114

21. Monoamine oxidase inhibitor toxicity **115**
Clinical manifestations and diagnosis of toxicity 115; Management 116

22. Neuroleptic agents **117**
Management 118

23. Opiate overdose **119**
Clinical manifestations 119; Management 119

24. Phencyclidine and hallucinogens **121**
Acute toxicity 121; Hallucinogens 122

25. Pesticide poisoning **124**
Organochlorines 124; Pyrethrins 124; Anticoagulants 125; Strychnine 125; Aluminum and zinc phosphide 125; Methyl bromide 126; Paraquat 126

26. Salicylate and other nonsteroidal anti-inflammatory drugs poisoning **128**
Other NSAIDs 128; Toxicity 128; Management 129

27. Sedative-hypnotic poisoning **131**
Benzodiazepines 131; Barbiturates 132; Nonbenzodiazepine nonbarbiturate sedative-hypnotics 133; Benzodiazepine and TCA poisoning 133; Poisoning with TCAs 134; Symptoms 134; Benzodiazepine and TCA overdosage 134

28. Sympathomimetic poisoning **136**
Management 136

29. Systemic asphyxiants **138**
Cyanide 138; Hydrogen sulfide (H_2S) 140; Methemoglobin inducers 141; Methemoglobin 142; Levothyroxine poisoning 142; Aspiration pneumonia after gastric lavage 144

30. Withdrawal syndromes **145**
Alcohol withdrawal 145; Benzodiazepine withdrawal 146; Opiates 146

31. Plants and natural toxins **149**
Plants 149; Treatment of poisoning 149; Cannabis (Marijuana) 149; Oleanders 150; Mushroom 150

32. Toxicology and pregnancy **152**
Sangeetha Devarajan, Deepa Thangamani
Overdose and poisoning 152; Pregnancy and medications 152; Important quantitative drug levels 162

Bibliography *163*

Index *165*