

Contents

| | |
|---|-------------|
| Contributors | xi |
| Foreword | xv |
| Introduction | xvii |
| Abbreviations | xix |
| | |
| Part I: Scientific Basis of Paediatric Anaesthesia | 1 |
| 1 Normal development <i>Andrew J Davidson</i> | 3 |
| 2 The respiratory system <i>Janet Stocks</i> | 21 |
| 3 The cardiovascular system <i>Peter D Booker</i> | 39 |
| 4 Water, electrolytes and the kidney <i>Isabeau Walker</i> | 59 |
| 5 The liver and gastrointestinal tract <i>Peter Bromley, James Bennett</i> | 79 |
| 6 The central nervous system <i>Justin John, Igor Luginbuehl, Bruno Bissonnette</i> | 95 |
| 7 Haematology <i>Reema Nandi, Richard Martin</i> | 109 |
| 8 Effects of prematurity <i>Peter Crean, Anthony Chisakuta</i> | 125 |
| 9 Pharmacology: general principles <i>Brian J Anderson</i> | 139 |
| 10 Inhalational agents <i>Isabelle Murat</i> | 153 |
| 11 Intravenous induction agents and total intravenous anaesthesia <i>Neil S Morton</i> | 169 |
| 12 Opioids <i>Glyn Williams</i> | 185 |
| 13 Non-opioid analgesics <i>Hannu Kokki</i> | 199 |
| 14 Local anaesthetics and their adjuncts <i>Jean-Xavier Mazoit, Per-Arne Lönnqvist</i> | 211 |
| 15 Muscle relaxants <i>George H Meakin</i> | 227 |
| 16 Adjuncts to anaesthesia <i>Hilary Glaisyer</i> | 243 |
| | |
| Part II: Basic Techniques | 251 |
| 17 Preoperative assessment <i>Liam Brennan</i> | 253 |

| | | |
|---|---|------------|
| 18 | Preoperative preparation and medication <i>Kar-Binh Ong</i> | 265 |
| 19 | Equipment and basic anaesthesia techniques <i>Jane Lockie, David DeBeer</i> | 273 |
| 20 | Monitoring <i>Mike Broadhead, Monty Mythen</i> | 295 |
| Part III: Special Techniques | | 313 |
| 21 | Management of the difficult airway <i>Ann E Black</i> | 315 |
| 22 | Difficult venous access <i>Steve Scuplak, Derek J Roebuck</i> | 331 |
| 23 | Resuscitation <i>Robert Bingham</i> | 343 |
| 24 | Blood transfusion and conservation <i>Elizabeth Jackson</i> | 355 |
| 25 | Management of the uncooperative frightened child <i>Philip MD Cunnington</i> | 369 |
| 26 | Regional anaesthesia <i>Peter Marhofer, Stephan Kettner, Justus Benrath, Per-Arne Lönnqvist, Desiré Schabert</i> | 383 |
| 27 | Complex pain management <i>Richard F Howard</i> | 407 |
| 28 | Congenital and inherited disease <i>Sally E Rampersad, Anne M Lynn</i> | 425 |
| 29 | Anaphylaxis and malignant hyperthermia <i>Jane E Herod</i> | 445 |
| 30 | Difficult circulations <i>Sally Wilmshurst</i> | 457 |
| 31 | Difficult ventilation <i>Duncan Macrae, Robert Bingham, Adrian R Lloyd-Thomas, Michael RJ Sury</i> | 473 |
| Part IV: Specialised Anaesthesia | | 483 |
| 32 | General surgery and urology <i>Peter Stoddart</i> | 485 |
| 33 | Ear, nose and throat surgery <i>Adrian R Lloyd-Thomas</i> | 501 |
| 34 | Eye and dental surgery <i>Ian James</i> | 521 |
| 35 | Plastic surgery <i>Mark Ansermino, Michael RJ Sury</i> | 531 |
| 36 | Orthopaedic surgery <i>Gillian R Lauder</i> | 541 |
| 37 | Scoliosis surgery <i>John Currie</i> | 553 |
| 38 | Craniofacial and neurosurgery <i>Su Mallory</i> | 563 |
| 39 | Thoracic surgery <i>Patrick T Farrell</i> | 585 |
| 40 | Cardiac surgery including transplantation <i>Angus McEwan</i> | 599 |
| 41 | Liver, intestine and renal transplantation <i>James Bennett, Peter Bromley</i> | 621 |
| 42 | Trauma and transport <i>Daniel Lutman, Mark J Peters</i> | 635 |
| 43 | Burns <i>Bruce Emerson, Rebecca Martin</i> | 647 |

| | | |
|--|--|------------|
| 44 | Anaesthesia and sedation outside operating theatres <i>Michael RJ Sury</i> | 659 |
| Part V: Organisation and Philosophy | | 673 |
| 45 | Risk <i>Johan van der Walt</i> | 675 |
| 46 | Ethics <i>Duncan Macrae</i> | 689 |
| 47 | Research <i>Andrew R Wolf</i> | 697 |
| 48 | Organisation of services <i>Kathy Wilkinson</i> | 709 |
| 49 | Education and simulation <i>Mark Thomas</i> | 725 |
| 50 | Paediatric anaesthesia in developing countries <i>Adrian Bösenberg</i> | 731 |
| Appendices | | |
| 1 | Accepted normal ranges of vital cardiorespiratory variables quoted from the European Paediatric Life Support (EPLS) manual | 743 |
| 2 | Anaesthesia drugs | 745 |
| 3 | Other drugs that may be required either during anaesthesia, intensive care or postoperatively | 749 |
| 4 | Doses and calculations for commonly used IV infusions | 753 |
| 5 | Basic Life Support and resuscitation algorithms | 755 |
| Index | | 757 |