

Contents

Abbreviations ix

Contributors xi

SECTION 1

Foundations

1. **Obesity: a global epidemic** 3
Bhavna Saxena and Ashish C. Sinha
2. **Defining obesity** 21
Sunil Sinha and Hawa Abubakar
3. **Genetics of obesity** 29
Chase D. Rose and Ajintha Pathmanathan
4. **Pharmacokinetics and pharmacodynamics in obesity** 39
Tiffany Sun Moon and Babatunde O. Ogunnaike
5. **Opioid pharmacology in obese patients** 49
Jan P. Mulier and Ruben Wouters
6. **Inhaled anaesthetics and morbid obesity** 53
Luc De Baeremaeker, Jan Hendrickx, and Andre M. De Wolf
7. **Neuromuscular blocking agents in obesity** 63
Ajintha Pathmanathan and Paul Stewart

SECTION 2

Obesity and physiology

8. **Metabolic syndrome** 77
Patrick J. Neligan
9. **Cardiorespiratory physiology including airway changes in obesity** 85
Jahan Porhomayon and Peter J. Papadakos
10. **Obstructive sleep apnoea: incidence, physiology, and management** 89
Raviraj Raveendran and Frances Chung

11. **Continuous positive airway pressure: physiology and perioperative implications** 101

Rainer Lenhardt and Jerrad R. Businger

SECTION 3

Non-bariatric surgery

12. **Thoracoabdominal surgeries in obese patients** 111
Deepu S. Ushakumari and Stephanie Rayos Callison
13. **Cardiac surgery in obese patients** 127
Deepu S. Ushakumari and Kelly A. Machovec
14. **Obesity and anaesthesia for spine and neurosurgery** 143
Anurag Tewari, Mahmood Ghazanwy, and Eugenia Ayrian

SECTION 4

Bariatric surgery

15. **Patient selection and overview of selected procedures** 153
*Matthew E. Pontell, Alvaro Galvez, Elizabeth Renza-Stingone, and Andres Castellanos**
16. **Outcomes in bariatric surgery** 161
*Gabriel Meikel, Elizabeth Renza-Stingone, and Andres Castellanos**

SECTION 5

Specific clinical issues

17. **Preoperative evaluation of the morbidly obese patient** 167
Rajeshwari Subramaniam, Hensikumar Pushparaj, and Ajisha Aravindan

18. **Perioperative analgesia** 181
Dipty Mangla
19. **Postoperative complications in the obese patient and their management** 193
Sara Bowman and S. R. Moonesinghe
20. **Ventilatory strategies in obesity and obesity hypoventilation syndrome** 201
Ranjani Venkataramani, Scott R. Coleman, and Ashish C. Sinha
21. **Difficult airway management** 207
Jeremy Collins and Brita M. Mittal
22. **Healthy obese: a paradox?** 213
Anupama Wadhwa and Detlef Obal
23. **Peripheral nerve blocks in the morbidly obese patient** 221
Anmar Mahmoud, Mansoor M. Aman, and Fahad Aman
24. **Cardiopulmonary resuscitation in the obese patient** 231
Eric Stander
25. **Day care surgery** 237
Adrian Sultana
26. **Fluid management in the obese patient** 245
Michelle Cole, David Gilhooly, and S. R. Moonesinghe
27. **Venous thromboembolism: incidence, prophylaxis, and management** 253
Elizabeth A. Valentine
28. **Tissue oxygenation in the obese patient** 265
Shubhangi Singh, Prashant Singh, and Preet M. Singh

SECTION 6

Other important aspects

29. **Perioperative paediatric obesity** 273
Alissa Doll and Aditee P. Ambardekar
30. **Obesity in pregnancy** 285
Onyi C. Onuoha
31. **Enhanced recovery after bariatric surgery** 295
Jon Livelsberger and Alla Spivak
32. **Obesity and non-operating room anaesthesia** 303
Akshat Gargya, Matthew Troum, and Marc Goldberg
33. **Intensive care** 309
Andrea L. Tsai and Roman Schumann
34. **Obesity and trauma** 319
Maureen McCunn, Justin Richards, and Karla Greco
35. **Guidelines and equipment in obese patients** 331
Christian Balabanoff-Acosta, Clint Fleckenstein, and Eric Gewirtz
36. **Medicolegal issues and the obese patient** 339
Abiona Berkeley, Muhammad Ahmed, and Jose Sosa-Herrera

Index 345