# Contents

## Part I  General Considerations

1. **The History of Local and Regional Anesthesia**  ..................................................... 3  
   Brendan T. Finucane

2. **Regional Anesthesia Safety** ...................................................................................... 15  
   John W.R. McIntyre and Brendan T. Finucane

3. **Local Anesthetic Toxicity: Prevention and Management** ..................................... 41  
   Derek Dillane

4. **Outcome Studies Comparing Regional and General Anesthesia** ....................... 55  
   Brian O’Donnell and Michael O’Sullivan

## Part II  Special Considerations

5. **Nerve Injury Resulting from Intraneural Injection When Performing Peripheral Nerve Block** ................................................................. 67  
   Rakesh V. Sondekoppam and Ban C.H. Tsui

6. **Regional Anesthesia in the Presence of Neurologic Disease** ................................. 103  
   John Shepler, Andrea Kattula, and George Arndt

7. **Evaluation of Neurologic Injury Following Regional Anesthesia** ......................... 113  
   Quinn Hogan, Keith McCollister, Matthew Harmelink, Laura Kohl, and Michael Collins

8. **Regional Anesthesia and Anticoagulation** .............................................................. 139  
   Robert B. Bolash and Richard W. Rosenquist

9. **Infection in Association with Local and Regional Anesthesia** ............................. 149  
   Terese T. Horlocker, Denise J. Wedel, and Adam D. Niesen

10. **Continuous Peripheral Nerve Blocks Safe Practice and Management** ............... 167  
    Geert-Jan van Geffen and Jörgen Bruhn

## Part III  Specific Regional Blocks: Safe Practice and Management of Adverse Events

11. **Complications of Regional Anesthesia: Upper and Lower Extremity Blockade**  .............................................................................. 189  
    Stephen Choi, Patrick B.Y. Wong, Kristen Gadbois, and Colin J.L. McCartney

12. **Complications of Thoracic Wall Regional Anesthesia and Analgesia** .................. 199  
    Christine Lee and F. Michael Ferrante
Abdominal Wall Blocks: Safe Practice and Management of Adverse Events... 219
James D. Griffiths and Peter D. Hebbard

Epidural Blockade: Safe Practice and Management of Adverse Events ....... 227
Steven J. Gaff

Spinal Anesthesia: Safe Practice and Management of Adverse Events ........ 245
Pekka Tarkkila

Part IV  Specific Patient Populations: Safe Practice and Management of Adverse Events

Complications of Regional Anesthesia in Chronic Pain Therapy............... 261
David Flamer, Rachael Seib, and Philip W.H. Peng

Local and Regional Anesthesia in the Elderly........................................ 287
Ferrante S. Gragasin and Ban C.H. Tsui

Local and Regional Analgesia for Labor and Delivery .......................... 303
Yoo Kuen Chan and Peng Chiong Tan

Local and Regional Anesthesia in the Obese Patients ............................ 319
Hendrikus J.M. Lemmens

Local and Regional Anesthesia in Pediatrics ....................................... 327
Belen De Jose Maria

Part V  Special Environments: Safe Practice and Management of Adverse Events

Local and Regional Anesthesia in Dental and Oral Surgery .................... 341
Stanley F. Malamed, Kenneth L. Reed, Amanda Okundaye, and Andrea Fonner

Local and Regional Anesthesia in the Emergency Room ......................... 359
Andrew A. Herring

Recognizing and Mitigating Risk of Ophthalmic Regional Anesthesia ....... 369
Brad Wakeman, Robert William Andrew Machuk, Rizwan Somani,
Dean Y. Mah, and Ian M. MacDonald

Local Infiltration Analgesia for Orthopedic Joint Surgery ..................... 381
Sugantha Ganapathy, James L. Howard, and Rakesh V. Sondekoppam

Local and Regional Anesthesia in Plastic Surgery: Safety Considerations
and Management of Adverse Events ..................................................... 399
John Mesa, Don Lalonde, and Luis O. Vasconez

Part VI  Morbidity Studies: International Perspective

Development and Methodology of a Registry of Regional Anaesthesia........... 413
Michael J. Barrington

Australia: Results of a Multicenter Registry of Regional Anesthesia ............ 421
Michael J. Barrington

Canada: Medical Legal Aspects of Regional Anesthesia Practice ............... 429
Kari G. Smedstad and Brendan T. Finucane
29 France: Regional Anesthesia Morbidity Study ..................................................... 435
   Dan Benhamou

30 Nordic Countries: Principles of Safe Practice in Local and Regional Anesthesia................................................................. 441
   Mikko T. Pitkänen

31 United Kingdom: Recent Advances in the Safety and Prevention of Regional Anesthesia Complications .............................................. 445
   Graeme A. McLeod

32 United States: Complications Associated with Regional Anesthesia (An American Society of Anesthesiologists’ Closed Claims Analysis) .......... 451

33 United States: Chronic Pain Management (American Society of Anesthesiologists’ Closed Claims Project) ........................................ 463
   Albert H. Santora

Part VII  Medical Legal Aspects

34 Medical Legal Aspects of Regional Anesthesia: Physician Perspective ............ 473
   Albert H. Santora

35 Medical Legal Aspects of Regional Anesthesia: Legal Perspective ................. 483
   Bridgette Toy-Cronin and Kelly Byrne

Index .................................................................................................................................. 489
Complications of Regional Anesthesia
Principles of Safe Practice in Local and Regional Anesthesia
Finucane, B.; Tsui, B.C.H. (Eds.)
2017, XVIII, 501 p. 134 illus., 103 illus. in color., Hardcover
ISBN: 978-3-319-49384-8