

TABLE OF CONTENTS

Contributing Authors

Preface

Chapter 1. Preanesthetic Considerations

HuiChu Lin

Positioning

Ruminal tympany

Regurgitation

Salivation

Malignant hyperthermia

Differences in sensitivity to anesthetics

Preanesthetic preparation

References

Chapter 2. Commonly Used Preanesthetics

HuiChu Lin

Acepromazine (phenothiazine derivatives)

Droperidol and azaperone (butyrophenone derivatives)

Detomidine, dexmedetomidine, medetomidine, romifidine, and xylazine (α_2 agonists)

Atipamezole, tolazoline, yohimbine, and vatinoxan (α_2 antagonists)

Diazepam and midazolam (benzodiazepine derivatives)

Chloral hydrate

References

Chapter 3. Standing Sedation and Chemical Restraint

HuiChu Lin

Cattle

Small ruminants and camelids

Swine

References

Chapter 4. Injectable Anesthetics and Field Anesthesia

HuiChu Lin

Injectable anesthetics

Ketamine

Telazol

Alfaxalone

Guaifenesin

Field anesthesia

Cattle

Small ruminants and camelids

Swine

References

Chapter 5. Neuromuscular Blocking Agents

Stuart Clark-Price

Physiology of the neuromuscular junction

Mechanism of action of NMBA

Depolarizing neuromuscular blocking agents

Non-depolarizing neuromuscular blocking agents

Clinically useful NMBA

Atracurium

Cis-atracurium

Vecuronium

Rocuronium

Monitoring of NMBA action

Reversal of NMBA

References

Chapter 6. Inhalation Anesthesia and Use of Ventilator

HuiChu Lin

Cattle

Small ruminants and camelids

Swine

Use of Ventilators

References

Chapter 7. Perioperative Monitoring and Management of Complications

HuiChu Lin

Perioperative monitoring

Supportive fluid therapy

Positioning

Recovery

Perioperative complications

Regurgitation and aspiration pneumonia

Airway obstruction

Ruminal tympany/bloat

Salivation

Hypoventilation

Cardiac arrhythmias

Hypotension

Hypothermia

Malignant hyperthermia

Postanesthetic neuromyopathy

Cardiovascular collapse

References

Chapter 8. Local and Regional Anesthetic Techniques

Jessica Rush and Jenna Stockler

Local anesthetic agents

Anesthesia for dehorning

Anesthesia for the eye and eyelids

Nasal anesthesia

Anesthesia for reproductive procedures and for cessation of straining

Caudal epidural anesthesia

Continuous caudal epidural anesthesia

Internal pudendal nerve block

Dorsal penile nerve block

Sacral paravertebral nerve block

Lumbosacral epidural anesthesia

Anesthesia for laparotomy

Line block

Inverted L block

Proximal paravertebral block

Distal paravertebral block

Anesthesia for udder and teats

Anesthesia of the limbs

Castration

References

Chapter 9. Anesthetic Management of Specific Procedures

Benjamin Newcomer

Urogenital surgery in the male

Castration

Penile papilloma

Persistent frenulum

Penile translocation

Epididymectomy

Vasectomy

Urogenital surgery in the female

Cesarean section

Ovariectomy

Vaginal prolapse

Perineal laceration

Surgical disorders of the abdomen

Laparotomy

Disorders of the forestomachs

Displacements and volvulus of the abomasum

Small intestine disorders (intussusception, intestinal volvulus, intestinal obstruction)

Urolithiasis and bladder rupture

Umbilical hernias

Musculoskeletal indications

Dehorning

Claw amputation and facilitated ankylosis

Excision of interdigital fibromas

Teeth Floating

Tail docking

Rectal prolapse

Wounds, lumps, bumps, and abscesses

Wound management

Ocular squamous cell carcinoma

Enucleation

Entropion

Abscess removal for caseous lymphadenitis

References

Chapter 10. Pain Management for Farm Animals

HuiChu Lin

Local anesthetics

Systemic pain management

Opioid analgesics

Nonsteroidal anti-inflammatory drugs

Alpha-2 agonists

Ketamine

Gabapentin

Drug combinations for pain management

Constant rate infusion

Local or regional analgesia

Caudal epidural analgesia

Lumbosacral epidural anesthesia

Intra-articular analgesia

References

Chapter 11. Fluid Therapy

Manuel F. Chamorro and Paul H. Walz

General considerations

Physiology of body fluids

Patient assessment

Fluid and electrolyte therapy in the perioperative period

Quantity and rate of fluid administration

Fluid type selection

Fluid therapy in cases of calf diarrhea

Fluid therapy in cases of acute ruminal acidosis (grain overload)

Fluid therapy in cases of Hepatic lipidosis/Ketosis/Pregnancy toxemia

Fluid therapy in cases of abomasal and small intestinal disorders

Fluid therapy for cases of sepsis (septic peritonitis, septic omphalitis, etc.)

Fluid therapy in cases of urinary tract obstruction/rupture

Whole blood transfusions

Method of administration

Monitoring fluid administration

References

Chapter 12. Regulatory and Legal Considerations of Anesthetics and Analgesics Used in Food Producing Animals

Thomas Passler

Alpha-2 agonists and antagonists

Barbiturates

Benzodiazepines

Dissociative anesthetics

Local anesthetics

Opioids

Non-steroidal anti-inflammatory drugs (NSAIDs)

Phenothiazine Derivatives

Propofol

References

13. Euthanasia of Farm Animals

Thomas Passler

Considerations prior to Euthanasia

The Process of Euthanasia

Methods of euthanasia

Injectable euthanasia agents

Physical methods

Adjunctive and other methods of euthanasia

Considerations Subsequent to Euthanasia

References.