INDEX

Page references followed by f denote figures. Page references followed by t denote tables.

Abdominal exploration
  in cattle, 212–215, 213f–214f
  in horses, 196–202, 197f–200f
Abomasopexy
  left-flank, 222, 225, 226f–227f
  paramedian, 221–222, 228, 229f–230f
  right-flank, 222, 225, 228
Abomasum
  left-side displacement (LDA), 221–222, 224, 226f, 228, 230
  right-side displacement (RDA), 221–222, 224–225, 230–231
  right torsion (RTA), 221–222, 224, 226f
Anastomosis, 231–232
Anesthesia. See also Regional analgesia; specific surgical techniques
  general, 16–23
  induction, 19–21, 19t–21t
  maintaining, 21–23, 22t
  overview, 16, 18
  preanesthetic evaluation, 18
  local and regional, 7–16, 8f–9f, 11f–12f, 13t–14t, 15f
  monitoring, 23
  for wound exploration, 95
Anion gap, 26
Antimicrobial therapy, in traumatic wounds, 95
Babcock intestinal forceps, 43f
Backhaus towel clamps, 42f
Balfour retractor, 38, 48f
Balling behavior of boars, 316
Balling gun, 58f
Bandages, 88, 88f
Bandage scissors, 36, 40f
Bandaging skin grafts, 109
Barnes dehorner, 280
Base deficit/excess, 25–26, 28
Bennett’s speculum, 55f
Benzetropine mesylate, for priapism, 146
Bicarbonate
  administration of, 28
  concentration in acid-base diagnosis, 25–26
Bistoury (tenotomy) knife, 114, 115f–116f
Bladder marsupialization, 297
Blow, 11, 18, 23, 219
Bone-holding forceps, Kern, 48f
Bone rasp, 48f, 50f
Bone rongeurs, 50f
Bovine. See Cattle
Bowed tendon, 127
Braided absorbable sutures, 62, 65

© 2013 John Wiley & Sons, Inc. Published 2013 by John Wiley & Sons, Inc.
Breeder’s stitch, 159
Brown-Adson forceps, 42f
Buhner method of repair for vaginal prolapse, 265–266, 267f–268f
Buhner tape needle, modified, 57f
Bulb syringe, 51f
Bulls
castration
of calf, 235–236, 237f
unilateral, 257–258
corpus cavernosum penis (CCP)
  thrombosis, 251–252
epididymectomy, 252, 253f
hematoma evacuation of penis, 241–245, 243f–244f
inguinal herniorrhaphy, 252, 254–257, 255f–256f
penile fixation, 250f, 251
penile translocation, 248, 249f, 251
preputial resection and anastomosis, 245–248, 247f
teacher bull preparation, 248–252, 249f–250f
urethrostomy, 236, 238, 239f–240f, 241
Bupivacaine, 7–8
Butorphanol, for tranquilization and sedation
  in cattle, 16t
  in horses, 17t
Calcci, urinary
  in cattle, 238
  in small ruminants, 296–297
Calf castration, 235–236, 237f
Camelid surgery, 303–309
castration of the llama, 303–304
cesarean section, 304–305
tooth removal in the llama, 305–309, 307f–308f
Cannula, teat, 58f
Capillary refill time, 24
Capillaries, measurement of, 25–26
Caslick’s operation for pneumovagina in the mare, 156–159, 157f–158f
Castration
  cattle
  calf, 235–236, 237f
  unilateral in bull, 257–258
  horse, 139–152, 141f–144f
  complications, 145–146, 152
  cryptorchidectomy, 147f–152f, 152–156
  llama, 303–304
  swine, 311–312, 313f
  cryptorchid castration of piglets, 314, 316
Catgut, 62
Catheter
  cow, 55f
  epidural, 11
  mare, 56f
  stud, 56f
Cattle
abdominal exploration, 212–215, 213f–214f
dehorning, 277, 279–280, 281f–282f
digit amputation, 273–276, 275f
epidural anesthesia, 10–11, 11f
eye enucleation, 276–277, 278f–279f
fluid balance evaluation, normal values for, 25t
gastrointestinal surgery, 211–232
  for abomasal displacement/torsion, 221–231, 223f, 226f–227f, 229f–230f
  abomasopexy, left-flank, 222, 225, 226f–227f
  abomasopexy, paramedian, 221–222, 228, 229f–230f
  abomasopexy, right-flank, 222, 225, 228
cecal dilatation/volvulus, 231
laparotomy, flank, 212–215, 213f–214f
laparotomy, principles of, 25t
martopexy, right-flank, 221–222, 223f
pyloro-omentopexy, 224–225
rumenostomy (rumen fistulation), 219–221, 220f
rumenotomy, 215–219, 217f–218f
small intestinal resection and anastomosis, 231–232
general anesthesia in, 16–24, 20t, 22t
intubation in, 20
regional analgesia, 8–11, 8f–9f, 11f, 13t, 14, 15f
rib resection and pericardiectomy, 280, 282–283, 284f–285f
surgical site preparation, 6
  teat laceration repair, 283, 285–288, 287f
third eyelid resection, 288
tracheotomy, 288–289
tranquilization and sedation, 16, 16t
umbilical surgery, 289–290
urogenital surgery, 235–270
  castration of calf, 235–236, 237f
cervicopexy for vaginal prolapse, 266, 268–270, 269f
cesarean section, 258–265, 260f–264f
corpus cavernosum penis (CCP)
thrombosis, 251–252
epididymectomy, 252, 253f
hematoma evacuation of penis, 241–245, 243f–244f
inguinal herniorrhaphy, 252, 254–257, 255f–256f
penile fixation, 250f, 251
penile translocation, 248, 249f, 251
preputial resection and anastomosis in bull, 245–248, 247f
retention suturing of vulva, 265–266, 267f–268f
teacher bull preparation, 248–252, 249f–250f
urethrostomy, 236, 238, 239f–240f, 241
Cattle leader, 52f
CCP (corpus cavernosum penis)
thrombosis, 251–252
Cecal dilatation/volvulus, in cattle, 231
Cervical prolapse, 265
Cervicopexy for vaginal prolapse, in cattle, 266, 268–270, 269f
Cervix, laceration of, 170
Cesarean section
  in camels, 304–305
  in cow, 258–265, 260f–264f
  in mare, 160, 162–164, 163f
  in small ruminants, 299–300
  in swine, 317–319, 318f
Chains, obstetric, 56f
Cheek tooth repulsion, in horses, 191–196, 193f–194f
Chemical sterilization, 38
Chip fractures, fetlock joint, 134–136, 135f
Chisel
  Alexander, 49f
  U.S. Army, 49f
Chlorhexidine, 6, 94
Chloride, serum, 27
Chloride, serum, 27
Corpus cavernosum penis (CCP) thrombosis, 251–252
Cotton, 64t, 66
Counterirritants, 113
Crile forceps, 43f
Cruciate (cross mattress) suture, 81, 82f
Cryptorchidectomy in horses, 147f–152f, 152–156
inguinal approach, 147f–149f, 153–154
laparoscopic, 152f, 155–156
parainguinal approach, 150f–151f, 154
standing flank approach, 151f, 154
in swine, 314, 316
Curette, 49f
Cushing suture, 85, 85f
Cystostomy, tube, 296–297
Cyanoacrylate, 67
Cushing’s suture, 85, 85f
Curette, 49f
Debridement, 95, 97
Dead space, 96–98
Dehorning
Barnes-type, 52f
gouge, 53f
keystone, 53f
Dehorning cosmetic in cattle, 277, 279–280, 281f–282f
of mature goat, 293–295, 294f
regional analgesia for, 14
Dehydration, 23–24, 24t
Delayed primary closure, 96
Dental elevator, 50f
Dental float, 53f
Dental formula
horse, 191
llama, 305, 305f
Dental punch, 53f, 192, 193f–194f, 195–196
Dental surgery
repulsion of cheek teeth in horses, 191–196, 193f–194f
tooth removal in the llama, 305–309, 307f–308f
Deslurane, 21
Desmitis
deep digital flexor accessory ligament, 119
suspenary, 124, 131
Desmotomy, in horses
annular ligament, 127–129, 128f
inferior (distal) check ligament, 119–122, 121f
medial patellar, 113–114, 115f–116f
superior check ligament, 122–124, 123f
Detomidine
for anesthetic maintenance, 22t
epidural use of, 10–11, 13t–14t
for tranquillization and sedation in cattle, 16t
in horses, 16, 17t
Dexon, 63t, 65
Diazepam (Valium)
for anesthetic induction, in cattle and small ruminants, 20t
for convulsion control, 8
for tranquillization and sedation in small ruminants, 16
in swine, 18t
Digit amputation in cattle, 273–276, 275f
via disarticulation, 274, 276
Disarticulation, digit amputation via, 274, 276
Disbudding young goat, 295–296
Distal (inferior) check ligament desmotomy, 119–122, 121f
Dobutamine, for hypotension, 22
Dopamine, for hypotension, 22
Dorsal displacement of the soft palate (DDSP), in horse, 184
Dose syringe, 59f
Double-layer inverting suture patterns, 87–88
Doyen (Gillmann) compression forceps, 43f
Drains, 97–101
active, 99, 100f–101f
fenestrated tube, 99, 100f
for hygromas, 98, 98f
indications, 97
passive, 97–98
Penrose, 98, 98f
for peritoneal drainage, 99, 101f
sum-Penrose, 99, 101f
Draping, 4, 6
Dressing, tie over, 88, 88f
Droperidol, for tranquillization and sedation in swine, 16, 18t
Dystocia
in camelids, 304–305
in cow, 258
in mare, 160, 162–164, 163f
in small ruminants, 299–300
in sow, 317–319
Écraseur, 59f
Ectropion, Z-plasty for relief of acquired, 105, 106f
Edema, in equine castration, 145
Electrolyte abnormalities, diagnosis of, 26–27
Elevator, dental, 50f
Elliptical excision undermining for repair of an elongated defect, 103, 104f
Emasculator, 52f
Empyema, guttural pouch, 186, 189
Endotracheal intubation, 18
in cattle, 20
in swine, 20–21
Endotracheal tube, 59f
Enucleation of the eye, in cattle, 276–277, 278f–279f
Ephedrine, for hypotension, 22
Epididymectomy, 252, 253f
Epidural analgesia, 10–11, 11f–12f, 13t–14t
Epineural capping, in palmar digital neurectomy, 129
Epithelialization, 93
Equine. See Horses
Equine molar forceps, 54f
Ethylene oxide, for sterilization, 38
Eventration, post-castration in horse, 145–146
Excision, sharp of wounds, 95
Eye enucleation in cattle, 276–277, 278f–279f
regional analgesia of, 14
third eyelid resection, 288
Eyeball rotation, for anesthetic monitoring in cattle, 23
Feed, withholding prior to surgery, 18
Femoral nerve paresis, 22
Fenestrated tube drain, 99, 100f
Fetlock (metacarpophalangeal) joint annular ligament transection, 127–129, 128f
arthrolysis, 134–136, 135f
flexure deformities of, 120, 122, 124–126
Fetotomy, 162
Finochietto rib spreader, 38, 48f
Fistulation, rumenal, 219–221, 220f
Flank laparotomy, in cattle, 212–215, 213f–214f
Flexure deformity, treatment of deep digital flexor tenotomy, 126–127
inferior check ligament desmotomy, 119–122, 121f
superficial digital flexor tenotomy, 124–126, 125f
superior check ligament desmotomy, 122–124, 123f
Float, dental, 53f
Fluid balance, normal values used in the evaluation of, 25t
Fluid therapy, 23–29
in anesthetized patient in elective surgery, 27
composition of fluids for, 28t
in compromised patient according to requirements, 27–29
without preliminary data, 29
Fluid volume deficits
  diagnosis of, 23–24, 24t
  treatment of, 27–29
Foals
  inducing anesthesia in, 19
  preanesthetic agents, contraindication for, 18
  umbilical herniorrhaphy, 207–210, 208f–209f
Foerster sponge forceps, 45f
Foley catheter, 296–297
Forceps
  Allis tissue, 37, 42f
  Babcock intestinal, 43f
  Brown-Adson, 42f
  Crile, 43f
  Doyen (Gillmann) compression, 43f
  equine molar, 54f
  Foerster sponge forceps, 45f
  grasping, 37
  Halsted mosquito, 37, 45f
  hemostatic, 37, 43f, 45f
  Kelly, 37, 44f
  Kern bone-holding, 48f
  Michel clip, 45f
  Mixter, 45f
  Ochsner, 46f
  Rochester-Carmalt, 45f
  sponge, 37
  thumb, 37, 37f
  tissue, 37, 42f
  use of, 37, 37f
  uterine biopsy, 37
  Gouge, 49f
  for anesthetic induction in swine, 25t
  for anesthetic induction in cattle and small ruminants, 19–20, 20t
  in horses, 19, 19t
  for anesthetic maintenance, 22t
  Guaifenesin, ketamine, and xylazine (GKX), 19–20
  for anesthetic induction in cattle and small ruminants, 20t
  for anesthetic induction in swine, 21t
  Gut, surgical, 62, 63t
  Guttural pouches, surgical entry and drainage of, 186–189, 187f–188f
Hair, presurgical removal, 5–6
Halothane, 23
Halsted mosquito forceps, 37, 45f
Hemorrhage, in equine castration, 145
Hemostatic forceps, 37, 37f, 43f, 45f
Hemorrhage, in equine castration, 145
Hemostatic forceps, 37, 37f, 43f, 45f
Herniation, in equine castration, 145
Herniorrhaphy
  umbilical herniorrhaphy, 207–210, 208f–209f
  for, 18
  in horses, 19, 19t
  in cattle, 211–210
  in horse, 196–210
  for tranquilization and sedation, 16, 17t
  tetanus prophylaxis, 5
  umbilical herniorrhaphy in foal, 207–210, 208f–209f
  general anesthesia, 18–20, 20t
  for, 25t
  regional analgesia, 14
  Orthopedic surgery, 113–136
  amputation of splint bones, 131–134, 132f–133f
  arthroplasty of fetlock joint, 134–136, 135f
  deep digital flexor tenotomy, 126–127
  inferior (distal) check ligament desmotomy, 119–122, 121f
  lateral digital extensor tenotomy, 114, 116–119, 117f–118f
  medial patellar desmotomy, 113–114, 115f–116f
  palmar digital neurectomy, 129–131, 130f
  sectioning of palmar (plantar) annular ligament of the fetlock, 127–129, 128f
  superficial digital flexor tenotomy, 124–126, 125f
  superior check ligament desmotomy, 122–124, 123f
  preoperative evaluation, 3
  regional analgesia, 7–11, 12f, 13t
  skin staple use in, 67
  surgical site preparation, 5
  tetanus prophylaxis, 5
  tranquilization and sedation, 16, 17t
  upper respiratory tract surgery, 177–189
  guttural pouch surgery/drainage, 186–189, 187f–188f
Grafting. See Skin grafting
Gram stain, 6
Grasping forceps, 37
Gut, surgical, 62, 63t
Gut, surgical, 62, 63t
Gut, surgical, 62, 63t
Gut, surgical, 62, 63t
Inguinal herniorrhaphy
Infiltration analgesia, 7–8
Inferior (distal) check ligament
Infection
Incisions, tension-relieving, 103–104
Hypoxema, 23
Hypovolemia, 24
Hypotension, during anesthesia, 22
Hyperthermia, malignant, 21
Hypernatremia, 26, 28
Hyperkalemia, 27
Hypercarbia, 23
Hyperkalemia, 27
Hypernatremia, 26, 28
Hyperthermia, malignant, 21
Hypokalemia, 27, 28
Hypotension, during anesthesia, 22
Hypovolemia, 24
Hypoxema, 23
Incisions, tension-relieving, 103–104, 104f
Infection
antibiotic use, 5
antimicrobial impregnated suture materials, 65
in castration, 146
postoperative, managing, 6
prevention, 4
skin staple use and, 67
Inferior (distal) check ligament
desmotomy, 119–122, 121f
Infiltration analgesia, 7–8
Inguinal herniorrhaphy
in bull, 252, 254–257, 255f–256f
in piglet, 312, 314, 315f
Inhalation anesthesia
for anesthetic induction in foals, 19
for anesthetic maintenance, 21–23, 22t
Instruments, 33–59. See also specific instruments
forceps, 37, 37f, 42f–46f
general surgery pack, 38
miscellaneous, 48f–59f
needle holders, 36–37, 36f, 39f–40f
photo gallery of, 39f–59f
preparation of, 38
retractors, 37–38, 47f–48f
scalpel, 33, 34f–35f, 35, 39f
scissors, 35–36, 35f, 40f–41f
towel clamp, 37, 42f
use of, 33–38
Insurance, 4
Interrupted horizontal mattress suture, 79, 79f
Interrupted Lembert suture, 84, 84f
Intravenous limb anesthesia of cattle, 164–166, 165f–166f
Lavage, for wound cleaning, 94
Limb anesthesia, intravenous, 14–16, 15f
Lock stitch, continuous, 79, 79f
Locking-loop tendon suture, 89, 14
Lock stitch, continuous, 83, 83f
Malignant hyperthermia, 21
Mallet, 49f
Laparoscopy, for cryptorchidectomy in horses, 152f, 155–156
Laparotomy in cattle
flank, 212–213, 213f–214f
principles, 211
in horse
standing flank, 202–206, 203f–206f
ventral midline, 196–202, 197f–200f
Laryngeal spasm, 20
Laryngeal ventriculotomy, in horse, 179–183, 181f–183f
Laryngotomy, in horse, 179–183, 181f–183f
Laser ventriculotomy/ventriculocordectomy, 183, 183f
Lateral digital extensor tenotomy, 114, 116–119, 117f–118f
Lavage, for wound cleaning, 94
Leader, cattle, 52f
Lembert suture continuous, 84–85, 84f
interrupted, 84, 84f
Lichty teat knife, 57f
Lidocaine hydrochloride
convulsions in sheep from, 8
for epidural analgesia, 10–11, 13f–14t
with epinephrine, 14
for local and regional analgesia, 7–8, 10, 14
Ligatures, 73, 75f, 76
Limb anesthesia, intravenous, 14–16, 15f
Line block, 8, 14
Lister scissors, 40f
Littauer stitch scissors, 40f
Llama, 303–309
castration of, 303–304
cesarean section, 304–305
dental formula, 305, 305f
ventriculocordectomy, 183, 184
Locking-loop tendon suture, 89, 89f, 91
Lock stitch, continuous, 83, 83f
Larynx, see also specific species
Laser ventriculotomy/ventriculocordectomy
Lateral digital extensor tenotomy
Lavage, for wound cleaning
Leader, cattle
Lembert suture
continuous
interrupted
Lichty teat knife
Lidocaine hydrochloride
convulsions in sheep from
epidural analgesia
with epinephrine
for local and regional analgesia
Ligatures
Limb anesthesia, intravenous
Line block
Lister scissors
Littauer stitch scissors
Llama
castration
cesarean section
dental formula
ventriculocordectomy
Locking-loop tendon suture
Lock stitch, continuous
Malignant hyperthermia
Mallet
Laparoscopy
Laparotomy
Laryngotomy
Laser ventriculotomy/ventriculocordectomy
Lateral digital extensor tenotomy
Lavage for wound cleaning
Leader, cattle
Lembert suture
continuous
interrupted
Lichty teat knife
Lidocaine hydrochloride
convulsions in sheep from
epidural analgesia
with epinephrine
for local and regional analgesia
Ligatures
Limb anesthesia, intravenous
Line block
Lister scissors
Littauer stitch scissors
Llama
castration
cesarean section
dental formula
ventriculocordectomy
Locking-loop tendon suture
Lock stitch, continuous
Needle(s), 67–69
Needle holder
Near-far-far-near suture, 81, 81f, 105
Navicular disease, palmar digital
Myopathy, postanesthesia, 22
Mouth wedge, Bayer, 53f
Mouth gag, canine, 54f
Morphine
Monifilament sutures, absorbable, 65
Molars, repulsion in horses, 191–196, 193f–194f
Molar forceps, equine, 54f
Molar cutter, 54f
Moist wound healing, 96–97
Molar cutter, 54f
Molar forceps, equine, 54f
Molars, repulsion in horses, 191–196, 193f–194f
Monofilament sutures, absorbable, 65
Morphine
epidural use of, 11, 13t
for tranquillization and sedation in horses, 17t
Mouth gag, canine, 54f
Mouth wedge, Bayer, 53f
Myopathy, postanesthesia, 22
Navicular disease, palmar digital
neurectomy for, 129
Near-far-far-near suture, 81, 81f, 105
Needle holder
knot tying with, 73, 74f
Mayo-Hegar, 39f
Olsen-Hegar, 40f
use of, 36, 36f
Needle(s), 67–69
for hollow-organ surgery, 83
swaged, 68, 68f
taper cut, 68, 69f
types, 67–69, 68f, 69f
Nerve blocks, 7, 14, 16. See also specific techniques
Neurectomy, palmar digital, 129–131, 130f
Neuroma, formation with palmar digital neurectomy, 131
Newberry knife, 236
Nippers, 54f
Nylon (Dermalon, Ethilon, Supramid), 64t, 66
Obstetric chains, 56f
Obstructive urolithiasis, in small ruminants, 296–297
Ochsner forceps, 46f
Ocular reflexes, 23
Olsen-Hegar needle holder, 40f
Omentopexy, right-flank, 221–224, 223f
Opioids, 16, 17t
Orthopedic surgery, equine, 113–136
Osteotome set, U.S. Army, 48f
Ovariohysterectomy in the pot-bellied pig, 319
Oxygen supplementation, 20, 23
Packed cell volume (PCV), 24, 25t, 27
Palate, partial resection of soft in horses, 183–184, 185f
Palmar digital neurectomy, 129–131, 130f
Palmar/plantar annular ligament transaction, 127–129, 128f
Palpebral reflexes, 23
Paralumbar block, 10
Paramedian abomasopexy, 221–222, 228, 229f–230f
Paraphimosis, 146, 252
Paravertebral block, 9–10, 9f
Patella, medial desmotomy of, 113–114, 115f–116f
Packing, pedicle, 131–134
Palestine experience, 161–169
Packson, 252
Pallidum, cholinergic, 220–224
Palmotomy, 132f–133f
Pappenheimer bodies, 226
Papillae, 228
Parotid duct, 228
Pars plana vitrectomy, 227
Parotid gland, 218
Pathology, 219
Pars plana vitrectomy, 227
Pathology, 219
Patella, medial desmotomy of, 113–114, 115f–116f
Parker-Kerr oversew, 86, 86f
Paralumbar block, 10
Parasite (Elaeotrypanum), 221
Periodontal probe, 50f
Peritoneal drainage, 99, 101f
Peritonitis, 83, 218–219, 270
Peroneal nerve paresis, 22
Peterson block, 14
PH, blood, 25
Physical examination, preoperative, 3
Pigs. See Swine
Pig snare, 52f
Pneumovagina, Caslick’s operation for, 156–159, 157f–158f
Poliglecaprone 25 (Monocryl), 64t, 65
Polydioxanone (PDS), 63t, 65
Polyesters, 64t, 67
Polyethylene, 64t, 66
Polyglycinic acid (Dexon-Tyco), 63t, 65
Polyglycolic acid (Dexon-Tyco), 63t, 65
Polyglactin 910 (Vicryl-Ethicon), 63t, 65
Polyethylene, 64t, 66
Polypropylene (Prolene and Surgilene), 64t, 66
Polysorb, 63t, 65
Potassium abnormalities, 27
administration of, 28–29
Pot-bellied pig, ovariohysterectomy in, 319
Povidone-iodine, solution/scrub, 6, 94
Premedication, 18–19
Preoperative evaluation, 3–4
Preputial diverticulum ablation, in swine, 316, 317f
Preputial resection and anastomosis in bull, 245–248, 247f
Presurgical considerations, 3–6
antibiotic use, 5
infection, postoperative, 6
infection prevention, 4
preoperative evaluation, 3–4
preoperative planning, 5
surgical classification, 4–5, 4t
surgical judgment, 4
surgical site preparation, 5–6
Priapism, 146
Primary closure, 96
Probe, periodontal, 50f
Propofol, 20–21, 20t
Proud flesh, 97
Proximal sesamoid bones, chip fracture, 134–136, 135f
Pupillary dilation, 23
Putti double-ended bone rasp, 48f
Pyloro-omentopexy, 224–225
Reconstructive surgery. See Wounds, reconstructive surgery of
Record keeping, 3–4
Rectal prolapse  
- resection in small ruminants, 300–301, 301f  
- ring placement in swine, 319–320  
- Reeling, 164–166, 165f–166f, 245–246  
- Referral, 4  
- Regional analgesia, 7–16  
  - epidural analgesia, 10–11, 11f–12f, 13t–14t  
- eye, 14  
- horn, 14  
- inverted L block, 8, 8f  
- limb, 14–16, 15f  
- paravertebral block, 9–10, 9f  
- Regurgitation, 18, 20  
- Reimer emasculator, 52f  
- Respiratory acidosis, 25  
- Respiratory tract surgery in the horse, 177–189  
- Retention suturing of the bovine vulva, 265–266, 267f–268f  
- Reticulum, exploration of, 215–219, 217f–218f  
- Retractor  
  - Balfour, 38, 48f  
  - Finochietto rib spreader, 38, 48f  
  - Gelpi, 38, 47f  
  - malleable, 37, 47f  
  - Senn, 37, 47f  
  - United States Army, 37, 47f  
  - use of, 37–38  
  - Volkmann, 37, 47f  
  - Weitlaner, 38, 47f  
- Retrobulbar (four-point) block, 14  
- Rib resection, in cattle, 280, 282–283, 284f–285f  
- Rib spreader, Finochietto, 38, 48f  
- Richter's hernia, 207  
- Roaring, 179  
- Roaring bur  
  - French-model, 57f  
  - Holday's, 56f  
  - strawberry, 57f  
- Rochester-Carmalt forceps, 45f  
- Roeder knot, 4-S modified, 73, 73f  
- Roeder towel clamps, 42f  
- Romifidine  
  - for anesthetic maintenance, 22t  
  - for tranquillization and sedation in horses, 16, 17t  
- Rongeurs, 50f  
- Rumenostomy (rumen fistulation), 219–221, 220f  
- Rumenotomy, 215–219, 217f–218f  
- Rumenotomy board, 56f  
- Savage technique, 91, 91f  
- Scalpel, 33, 34f, 39f  
- Scalpel blade, 33, 34f, 35, 35f, 39f  
- Scar tissue, removal of excessive, 105, 107f  
- Scissors  
  - bandage, 36, 40f  
  - Lister, 40f  
  - Littauer stitch, 40f  
  - Mayo, 35, 40f  
  - Metzenbaum, 35, 41f  
  - operating, 41f  
  - use of, 35, 35f  
  - wire-cutting, 41f  
- Scrubbing, surgical site preparation, 6  
- Sedation  
  - in cattle, 16, 16t  
  - in horses, 16, 17t  
  - purposes for, 16  
  - in small ruminants, 16, 18t  
  - in swine, 16, 18t  
- Senn retractor, 37, 47f  
- Serratia emasculator, 52f  
- Sesamoid chip fracture, 134–136, 135f  
- Sevoflurane, 21  
- Shearing, surgical site preparation, 6  
- Skin elasticity, estimating, 23  
- Skin grafting, 105–111  
  - bandaging, 109  
  - overview, 105, 107  
  - pinch-skin, 107, 108f, 109  
  - postgrafting, 109  
  - punch-skin, 109, 110f  
  - random pattern flaps, 109, 111  
  - recipient bed preparation, 107  
  - tunnel grafting, 109, 111f  
- Skin punch, Keyes, 50f  
- Skin staples, 67  
- Sliding H-flap, 105, 105f  
- Slipknot (two half-hitches), 71, 72f  
- Small intestinal resection and anastomosis, 231–232  
- Small ruminants. See also Goats; Sheep  
  - epidural anesthesia, 13t  
  - surgery, 293–301  
  - cesarean section, 299–300  
  - dehorning of mature goat, 293–295, 294f  
  - disbudding young goat, 295–296  
  - mastectomy, 297–298  
  - obstructive urolithiasis, 296–297  
  - resection, 300–301, 301f  
  - vasectomy, 298–299  
  - tranquilization and sedation, 16, 18t  
  - Sodium, serum, 24  
  - Sodium ion abnormalities, 26–27  
  - Soft palate, partial resection in horses, 183–184, 185f  
  - Sow, cesarean section in the, 317–319, 318f  
- Speculum  
  - Bennett's, 55f  
  - heavy-swine mouth, 53f  
  - McPherson, 53f  
  - thoroughbred vaginal, 54f  
  - Splint bones, amputation of, 131–134, 132f–133f  
  - Sponge forceps, 37  
  - Square knot, 71, 72f  
  - Stainless steel, 64t, 67  
  - Standing flank laparotomy, in horse, 202–206, 203f–206f  
  - Stent bandages, 88, 88f  
  - Sterilization of instruments, 38  
  - Still-Luer bone rongeurs, 50f  
  - Stitch scissors, Littauer, 40f  
  - Stomach pump, 59f  
  - Strawberry roaring bur, 57f  
  - Stringhalt, 114, 116, 119  
  - Strong ion gap, 26  
  - Subcuticular suture, 81, 82f  
  - Suction tip, Yankauer suction, 51f  
  - Sump-Penrose drain combination, 99, 101f  
- Superficial digital flexor tendinitis, treatment of, 122, 124  
- Superficial digital flexor tenotomy, 124–126, 125f  
- Superior check ligament desmotomy, 122–124, 123f  
- Surgeon's knot, 72f, 73  
- Surgery pack, general, 38  
- Surgical classifications, 4–5, 4t  
- Surgical conscience, 5  
- Surgical gut, 62, 63t  
- Surgical instruments. See Instruments  
- Surgical judgment, 4  
- Surgical preparation. See specific surgical techniques  
- Surgical site, preparation of, 5–6  
- Suspensory desmitis, 124, 131  
- Suspensory ligament, 134–136, 135f  
- Suture materials, 61–67  
  - absorbable, 62, 65  
  - braided, 62, 65  
  - collagen, 62  
  - monofilament, 65  
  - surgical gut (catgut), 62, 63t  
  - antimicrobial impregnated, 65  
- Buhner perivaginal tape, 265–266, 267f–268f  
- Clinical application, 61–62
Suture materials, (cont’d)
common, table of, 63t–64t
ideal, properties of, 61
nonabsorbable, 65–67
cotton, 64t, 66
nylon, 64t, 66
polypesters, 64t, 67
polymerized caprolactam, 64t, 66–67
polypropylene and polylethylene, 64t, 66
silk, 64t, 65–66
skin staples, 67
stainless steel, 64t, 67
in traumatic wounds, 96
Suture patterns, 77–91. See also specific techniques
basic patterns, 77–83
continuous horizontal mattress, 79, 79f
continuous lock stitch (Ford interlocking), 83, 83f
cruciate (cross mattress), 81, 82f
interrupted horizontal mattress, 79, 79f
near-far-far-near, 81, 81f, 105
simple continuous, 77–78, 78f
simple interrupted, 77, 77f
subcuticular, 81, 82f
vertical mattress, 79, 80f, 81, 105
Buhner’s method, 265–266, 267f–268f
buried purse-string, 265–266, 267f–268f
for closure of hollow organs, 83–88
Connell, 85–86, 85f
continuous Lembert, 84–85, 84f
Cushing, 84, 85f
double-layer inverting, 87–88
Gambee, 87, 88f
interrupted Lembert, 84, 84f
Parker-Kerr oversew, 86, 86f
purse-string, 86, 87f
simple continuous, 87
simple interrupted, 87, 87f
for severed tendons, 88–91
locking-loop tendon suture, 89, 89f, 91
Savage technique, 91, 91f
three-loop pulley pattern, 90f, 91
stent bandage (tie-over dressing), 88, 88f
Utrecht method of uterine closure, 259, 262f–264f
Sutting traumatic wounds, 96
Swine
castration of the piglet, 311–312, 313f
cesarean section, 317–319, 318f
cryptorchid castration of piglets, 314, 316
epidural anesthesia, 10–11, 14f
fluid balance evaluation, normal values for, 25t
general anesthesia in, 18–23, 21t, 22t
inguinal herniorrhaphy the piglet, 312, 314, 315f
intubation, 20–21
ovariohysterectomy in the pot-bellied pig, 319
premedication in, 19
preputial diverticulum ablation, 316, 317f
rectal prolapse ring placement, 319–320
surgical site preparation, 6
tranquilization and sedation, 16, 17f
Synovitis, digital sheath, 127
Syringe
bulb, 51f
dose, 59f
Tail docking, rectal prolapse and, 300
tape needle, modified Buhner, 57f
teeser bull preparation, 248–252, 251f–252f
tension-relieving skin incisions, 103–104, 104f
Tension suture
interrupted horizontal mattress, 79, 79f
near-far-far-near, 81, 81f, 105
vertical mattress, 79, 80f, 81, 105
Testicle
cattle
castration, 235–236, 237f
unilateral castration in bull, 257–258
horse
castration, 139–152, 141f–144f
cryptorchidectomy, 147f–152f, 152–156
llama castration, 303–304
swine
castration, 311–312, 313f
cryptorchid castration of piglets, 314, 316
Testosterone, measuring levels of, 146
Tetanus prophylaxis, 5, 95
Third eyelid resection, 288
Tissue forceps, 37, 42f
Tissue adhesives, 67
Tooth
anatomy, 191
removal in llama, 305–309, 307f–308f
repulsion of cheek teeth in horses, 191–196, 193f–194f
Total plasma protein (TPP), 24, 25t, 27
Towel clamps, 37
Backhaus, 42f
Roeder, 42f
Tracheostomy, in horse, 177–179, 178f
Tracheotomy tube, 288–289
Tracheotomy tube, 59f
Tranquilization
in cattle, 16, 16t
in horses, 16, 17t
purposes for, 16
in small ruminants, 16, 18t
in swine, 16, 18t
Transfixation ligation, 73, 75f
Traumatic wounds, assessment of, 93–94
Trephination, in horses, 192, 193f–194f, 195
Trephine
Galt, 53f
Michel, 51f
Triclosan, 63t, 65
Triplet drip solution, 19–21, 21t–22t
Trocara, 99, 100f
corkscrew, 58f
tooth, 42f
Tuohy spinal needle, 11
Twitch, 52f
Typhlotomy, 231
Udder infusion tube, 58f
Umbilical herniorrhaphy in the foal, 207–210, 208f–209f
Umbilical surgery, 289–290
Umbilical tape, 66
United States Army chisel, 49f
United States Army retractor, 37, 47f
Upper respiratory tract surgery in the horse, 177–189
Urethral appendage, removal of goat, 296–297
Urethroplasty by caudal relocation of the transverse fold, 159–160, 161f–162f
Urethrostomy, in cattle, 236, 238, 239f–240f, 241
Urine pooling, 159
Urogenital surgery in cattle, 235–270
in horses, 139–174
Urolithiasis in cattle, 238
obstructive in small ruminants, 296–297
Uterine biopsy forceps, Jackson, 56f
Utrecht method of uterine closure, 259, 262f–264f
Vaginal prolapse, in cattle
cervicoplexy for, 266, 268–270, 269f
retention suturing (Buhner’s method), 265–266, 267f–268f
Vaginal speculum, 54f
Vasectomy, in small ruminants, 298–299
Ventilatory compromise, in anesthetized horses, 23
Ventral midline laparotomy, in horse, 196–202, 197f–200f
Ventriculocystomy/ventriculosocordectomy, in horse, 179–183, 181f–183f
Vertical mattress suture, 79, 80f, 81, 105
Vesicovaginal reflux, 159
Viborg’s triangle approach, to guttural pouches, 186, 187f
Vicryl, 63t, 65
Viscer al prolapse, in equine castration complication, 145–146
Volkman double-ended curette, 49f
Volkman retractor, 37, 47f
Volvulus abdominals, 221
cecal, 231
Vulsellum forceps, 37, 45f
Vulva, retention suturing of, 265–266, 267f–268f
Water, withholding prior to surgery, 18
Weingarth’s ring, 216
Weitlaner retractor, 38, 47f
Whitehouse approach, to guttural pouches, 186
Wire-cutting scissors, 41f
Wound contraction, 93
Wound management, 93–101
antibiotic therapy, 95
antiinflammatory drug therapy, 95–96
assessment of traumatic wounds, 93–94
closure and healing, 96–97
delayed primary, 96
primary, 96
secondary-intention, 96–97
wound care prior to closing, 97
drains, 97–101
active, 99, 100f–101f
fenestrated tube, 99, 100f
for hygromas, 98, 98f
indications, 97
passive, 97–98
Penrose, 98, 98f
for peritoneal drainage, 99, 101f
sump-Penrose, 99, 101f
excision and debridement, 95
exploration of wound, 94–95
preparation of wound, 94
Wounds, reconstructive surgery of, 103–111
closure using tension-relieving incisions, 103–104, 104f
eelliptical excision undermining for repair of elongated defect, 103, 104f
scar tissue removal, 105, 107f
skin grafting, 105–111
bandaging, 109
meshed grafts, 107
pinch-skin, 107, 108f, 109
postgrafting, 109
punch-skin, 109, 110f
random pattern flaps, 109, 111
recipient bed preparation, 107
tunnel grafting, 109, 111f
sliding H-flap, 105, 105f
Z-plasty, 105, 106f
Xylazine
for anesthetic induction in cattle and small ruminants, 20t
in horses, 19t
in swine, 21t
for anesthetic maintenance, 22t
epidural use of, 10, 13t–14t
for tranquilization and sedation in cattle, 16t
in horses, 16, 17t
in small ruminants, 16, 18t
in swine, 17t
Yankauer suction tip, 51f
Zolazepam. See Tiletamine/zolazepam (Telazol), for anesthetic induction
Z-plasty, 105, 106f