

# **Knowledge List Equine Internal Medicine**

## **General System**

1. Toxemia
  - a. Antigenic toxins
    - i. Exotoxins
    - ii. Endotoxins
  - b. Metabolic toxins
2. Hypothermia
  - a. Thermoregulation (neonatal)
    - i. Septic shock
    - ii. Acid-base imbalances
    - iii. Hypoglycemia
  - b. Hypothermia
3. Hyperthermia (Heat stroke)
  - a. Dehydration
4. Pain
  - a. Cutaneous
  - b. Visceral
  - c. Musculoskeletal
5. Sudden or unexpected death
  - a. Spontaneous internal hemorrhage
    - i. Carotid artery aneurysm
    - ii. Rupture of the middle uterine artery
  - b. Trauma
  - c. GI Conditions
    - i. Bloat
    - ii. Lightning strike or electrocution
    - iii. Poisons
    - iv. Anaphylaxis
6. Disturbances of body fluids
  - a. Dehydration
  - b. Water intoxication
  - c. Electrolyte imbalances
    - i. Hyponatremia
    - ii. Hypernatremia
    - iii. Hypochloremia
    - iv. Hypokalemia
    - v. Hyperkalemia
    - vi. Hypocalcemia
    - vii. Hypophosphatemia
  - d. Acid-Base imbalance
    - i. Acidosis
      1. Metabolic
      2. Respiratory

- ii. Alkalosis
      - 1. Metabolic
- 7. Nutritional status
  - a. Failure to gain, ill thrift
- 8. Immune deficiency disorders
  - a. Primary
    - i. Combined immunodeficiency
    - ii. Agammaglobulinemia
  - b. Secondary
    - i. Failure of passive transfer
    - ii. Atrophy of lymphoid tissue

## **Diseases of the newborn**

- 1. Perinatal disease
  - a. Diseases of the fetus
  - b. Intra-uterine infections
  - c. Abortion
  - d. Fetal death
  - e. Goiter
  - f. Dystocia
  - g. Neonatal metabolic disorders
  - h. Septicemia
  - i. Uroperitoneum
  - j. Ileus
  - k. Necrotizing enterocolitis
  - l. Hypoxic Ischemic Encephalopathy
- 2. Congenital defects
  - a. Structural
    - i. Intestinal atresia: Lethal white or Intestinal Aganglionosis
  - b. Functional
    - i. Glycogen Branching Enzyme Deficiency
    - ii. Hyperkalemic Periodic Paralysis
- 3. Neonatal infection
  - a. Environmental organisms
- 4. Critical care of the newborn
  - a. Omphalitis (Navel –ill)
  - b. Patent urachus
  - c. Passive transfer
  - d. Nutrition
  - e. Sepsis score – Foals

## **Gastrointestinal System**

- 1. Diseases of the buccal cavity and associated organs
  - a. Stomatitis
  - b. Foot and mouth
- 2. Disease of the pharynx and esophagus

- a. Megaesophagus
- b. Choke
- c. Guttural pouch mycosis
- d. Guttural pouch tympany
- e. Guttural pouch empyema/chondroids

**3. Disease of the non-ruminant stomach & intestines**

- a. Colic
  - i. Obstructive
  - ii. Strangulating
  - iii. Non-strangulating infarctive
  - iv. Inflammatory
- b. Ileus
- c. Ischemia
- d. Endotoxemia
- e. Gastric dilatation
- f. Gastric impaction
- g. Gastric ulcers
- h. Anterior enteritis
- i. Cecal impaction
- j. Intussusception
- k. Torsion
- l. Perforation
- m. Displacement
- n. Volvulus
- o. Enteroliths and fecaliths
- p. Intestinal hypermotility
- q. Diarrhea
- r. Ulcers
- s. Rectal stricture

**4. Congenital defects of the alimentary tract**

- a. Harelip
- b. Cleft palate
- c. Atresia of the salivary glands
- d. Choanal atresia
- e. Intestinal atresia

**5. Neoplasia of the alimentary tracts**

- a. Squamous cell carcinoma

**6. Diseases of the peritoneum**

- a. Peritonitis
  - i. Uterine rupture
  - ii. Rupture of the cecum or colon (equine)
  - iii. NSAID -> Cecal stasis, dilatation, perforation
  - iv. Parasite induced gastric ulceration/rupture
  - v. Toxemia
  - vi. Septicemia
- b. Rectal tears

- i. Iatrogenic
      - 1. Grade I-IV
- 7. Disease of the liver**
  - a. Jaundice
  - b. Hepatic Encephalopathy
  - c. Photosensitization
  - d. Displacement of the liver
    - i. Diaphragmatic hernia
  - e. Rupture
  - f. Toxic hepatitis
  - g. Portosystemic shunt
  - h. Hepatic lipidosis
  - i. Hepatic abscesses
  - j. Hepatic neoplasia
- 8. Disease of the pancreas**
  - a. Diabetes mellitus
  - b. Pancreatic adenocarcinoma

## **Cardiovascular System**

- 1. Arrhythmias
  - a. Sinus arrhythmias
  - b. Arrhythmias with normal, tachy or bradycardia
- 2. Diseases of the heart
  - a. Myocardial/ Cardiomyopathy disease
    - i. Bacterial myocarditis
    - ii. Viral myocarditis
    - iii. Parasitic Myocarditis
    - iv. Nutritional deficiency
    - v. Poisoning
    - vi. Venoms
- 3. Rupture of the heart and associated vessels
  - a. Foreign body penetration.
- 4. Cor Pulmonale
  - a. Right heart failure
- 5. Valvular disease/murmurs
  - a. Endocarditis
    - i. Vegetative
  - b. Rupture of the chordae tendineae
  - c. Pulmonary valve stenosis
- 6. Pericarditis
  - a. Traumatic
- 7. Congenital defects
  - a. VSD (neonates)
  - b. PDA (neonates)
  - c. Patent foramen ovale
  - d. Tetralogy of Fallot

8. Diseases of the blood vessels
  - a. Parasites
  - b. Viral arteritis
  - c. Bacterial arteritis
  - d. Vasoconstrictive agents
    - i. Ergot or fescue poisoning
  - e. Pulmonary embolism
  - f. Phlebitis
  - g. Thrombosis
9. Disease of the blood and blood-forming organs
  - a. Hemorrhagic disease
    - i. Vasculitis
    - ii. Purpura hemorrhagica
  - b. Coagulation defects
    - i. Hemophilia
    - ii. Von Willebrand dz
    - iii. Platelet disorders
  - c. DIC
  - d. Hypoproteinemia
10. Hemorrhage
  - a. Trauma
  - b. Ulcer
  - c. Vascular rupture
  - d. Ethmoid hematoma
  - e. EIPH
11. Peripheral Circulation Failure and Shock
  - a. Water intoxication
  - b. Edema
  - c. Anemia
  - d. Leukemia
12. Diseases of the spleen, lymphadenopathy and thymic disease
  - a. Lymphadenopathy
    - i. Strangles

## **Respiratory System**

1. Hypoxia
2. Hypercapnia
3. Epistaxis
4. Pulmonary congestion
5. Atelectasis
6. Pneumonia
7. Aspiration pneumonia
8. Neoplasm
9. Pneumothorax
10. Diaphragmatic hernia
11. Pleuritis

12. Rhinitis
13. Obstruction
14. Guttural pouch mycosis (eq)

## **Urinary System**

1. Nephrosis
2. Renal ischemia
3. Glomerulonephritis
4. Pyelonephritis
5. Hydronephritis
6. Cystitis
7. Bladder rupture
8. Urethral rupture
9. Urolithiasis
10. Patent urachus
11. Polycystic kidneys
12. Ectopic Ureter

## **Nervous System**

1. Hydrocephalus
2. Encephalitis
3. Trauma
4. Tumors
5. Meningitis
6. Epilepsy

## **Musculoskeletal system**

1. Metabolic
  - a. Hypocalcemia
  - b. Hypokalemia
  - c. Hypoglycemia
  - d. Hypomagnesemia
  - e. Exertional Myopathy
  - f. Equine Polysaccharide Storage Disease
2. Toxins
  - a. Plant toxins
3. Myopathy
  - a. Nutritional
  - b. Ischemic
4. Myositis
  - a. Clostridial
  - b. Eosinophilic
  - c. Fibrotic
5. Osteodystrophy
  - a. Nutritional

- b. Chemical
  - c. Inherited
  - d. Congenital
  - e. Environmental
  - f. Physical
6. OCD (swine & horses)
  7. Arthritis
  8. Synovitis
  9. Congenital defects
    - a. Arthrogryposis
    - b. Contracted tendons
    - c. Lupin ingestion
    - d. Locoweed ingestion

## **Integumentary System**

1. Dermatitis
2. Photosensitization
3. Alopecia
4. Seborrhea
5. Folliculitis
6. Subcutaneous emphysema
7. Panniculitis
8. Cutaneous cyst
  - a. Sebaceous
9. Cutaneous neoplasms
  - a. Sarcoid
  - b. Papilloma
  - c. Squamous cell carcinoma
  - d. Melanoma
  - e. Mast cell tumor
10. Lipoma
11. Bacterial
12. Fungal
13. Parasitic

## **Reproductive System**

1. Dystocia
2. Mastitis
3. Pyometra, metritis
4. Uterine prolapse

## **Infectious diseases**

1. Bacterial
2. Viral
3. Rickettsial

4. Fungal/algae
5. Protozoan
6. Parasitic – helminth
7. Parasitic – arthropod

### **Metabolic**

1. Hypocalcemia
2. Hypokalemia
3. Hypoglycemia
4. Hypomagnesemia

### **Nutritional**

1. Deficiencies of mineral nutrients
2. Deficiencies of fat soluble vitamins
3. Deficiencies of water soluble vitamins

### **Toxic Diseases**

1. phytotoxins
2. mycotoxins
3. zootoxins
  - a. Snakebite
  - b. Bee stings
  - c. Ant bites
  - d. Tick paralysis
  - e. Cantharidin poisoning (Blister beetle)

### **Allergy**

1. NI
2. Purpura Hemorrhagica
3. COPD