

## **Lung hemorrhage**

### Treatment

- oxygen supplement
- Fibrinogen or coagulation factor VIII injection

## **Immune mediated hemolytic anemia**

### Treatment

- Steroid 3 ml/kg 1 short
- Leflunomide 2-4 mg/kg q12h
- Gammagard 0.5-1.5 g/kg q6h or q8h or q12h
- Cyclophosphamide 50-250 mg/50ml

## **Feline food allergy (diarrhea)**

### Treatment

- dietary change l/d 70% +w/d 30% or w/d 100%

## **FIV concurrent with FVR (feline viral rhinotracheitis)**

### Treatment

- Supportive therapy
- Antibiotic (depended on sensitivity test)
- Core vaccine rebooting every 4 months

## **Copper storage hepatopathy**

- Accumulation of copper in the liver
- Bedlington terrier has autosomal recessive trait
- Can cause oxidative damage to cells and acute severe hemolysis
- High ALT, AST, ALP

### Clinical sign

- Acute lethargy
- Hepatic signs

### Treatment

- Zinc 10-50 mg/kg q12h PO
- Vitamin E 10 IU/kg/day PO
- Methionine 10-20 mg/kg/day PO

- Ursodeoxycholic acid 10-15 mg/kg q24h PO

## **Benign prostatic hyperplasia**

- Have two phases
  - Glandular: high number of large prostatic cells
  - Complex: hyperplasia, atrophy, cyst
- Clinical sign
  - Dysuria
  - Ribbon-like stool
- Treatment
  - Castration
  - Finasteride 0.5 mg/day
  - Megestrol acetate 0.11 mg/kg PO for 3 weeks
  - Medroxy progesterone 3 mg/kg SC

## **Hyperthyroid**

- History (most common)
  - Aggressive behavior
  - Body weight is rapidly decreasing
- Treatment
  - Y/D diet
  - Taurine + Coenzyme Q10

## **Epilepsy**

- Treatment

- Gall stone powder 0.1 g + Sanchi ginseng 0.3 g mixed together 0.1-0.2 g/pet
- Lingzhi 0.25 ml/kg
- Thalidomide 5 mg/kg

### **Abnormal lymphocyte (Leukocytopenia)**

- Differential diagnosis
  - Immune-mediated hemolytic anemia
  - Myeloma
  - Lymphoma
- Treatment
  - IMHA
    - Immunosuppressive drug (corticosteroid)
    - Oxygen-carrying support
    - Supportive care
    - Treat underlying cause
  - Myeloma
    - Supportive treatment
  - Lymphoma
    - Chemotherapy

### **Tracheal collapse**

- Clinical sign
  - Coughing
- Treatment
  - Oxygen supplement

- Cough suppressant
- Bronchodilator
- Stent replacement
- Manuka honey 1 teaspoon tid

### **Cholecystolithiasis**

- Long exposure of hyperlipemic state reduce CCK release induce gall bladder hypomotility
- Treatment
  - Change to i/d
  - Ursodeoxycholic acid 15-25 mg/kg PO
  - SAMe 20-40 mg/kg/day PO
  - AHCC

### **Pulmonary edema with congestive heart failure**

- Treatment
  - Good environment with oxygen supplement
  - Decrease preload with loop diuresis
    - Furosemide 2 mg/kg PO bid
  - Decrease blood pressure
    - Enalapril 0.5 mg/kg PO q12h
  - Increased cardiac contraction
    - Pimobendan 0.25-0.3 mg/kg PO q12h

### **Gall bladder mucocele**

- Treatment

- Cholecystectomy

## Pneumonia

- Clinical sign
  - Dyspnea
- Treatment
  - Nebulization
  - Inteferon

## Canine hypothyrodism

- Clinical sign
  - Cold intolerance
  - Bilateral symmetrical alopecia
- Blood chemistry
  - low serum T4
- Treatment
  - Acute
    - Levothyroxine 5 microgram/kg IV q12h then PO
  - Chronic
    - Levothyroxine 0.01-0.02 mg/kg PO q12h or 0.02 mg/kg q24h PO

## Fluid type

Fluid type	Na+ (mEq)	K+ (mEq)	Cl- (mEq)	Ca2+ (mEq)	pH
NSS	77		77		4.5-8.0

Acetate F	65.5	2	54.5	1.5	6.5- 7.5
Acetate D	65.5	2	54.5	1.5	4.0- 6.5
5% Glucose					3.5- 6.5

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## Electrolyte disturbance

### - Sodium

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- Hyponatremia (Na<sup>+</sup>)

Treatment : D5 1/2NS

- Hypernatremia (Na<sup>+</sup>)

Treatment : Increase drinking water

: Lactate's ringer solution (Correct dehydration)

: Do not decrease sodium level more than 0.5-1 mEq/L/hr and 10-12 mEq/L/day, dramatically sodium decrease can be cause of demyelination

$$\text{Na}^+ \text{ serum correction} = \frac{\text{Na}^+(\text{fluid}) - \text{Na}^+(\text{serum})}{(0.6 \times \text{BW})} + 1$$

$$\text{Infusion volume (ml)} = \frac{\text{expected Na}^+ (10-12 \text{ mEq/L/day})}{\text{Na}^+ \text{ serum correction}} \text{ (in 24 hrs)}$$

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- Potassium

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- Hypokalemia (K<sup>+</sup>)

Treatment : Guidelines for Routine Intravenous Supplementation of K<sup>+</sup> in Dogs and Cats

Serum K <sup>+</sup> (mEq/L)	mEq KCl to Add to 250 mL Fluid	mEq KCl to add to 1 L Fluid	Maximal Fluid Infusion Rate (mL/kg/hr)
<2.0	20	80	6
2.1-2.5	15	60	8
2.6-3.0	10	40	12
3.1-3.5	7	28	18
3.6-5.0	5	20	25

- Hyperkalemia (K<sup>+</sup>)

Treatment : An acute increase in serum K<sup>+</sup> to >6.5 mEq/L should be treated promptly. Asymptomatic animals with normal urine output and chronic hyperkalemia in the range of 5.5-6.5 mEq/L may not require immediate treatment.

Detail in some methods of hyperkalemia treatment

	Dose	Onset	Duration	Note
Calcium gluconate	2-10 ml of 10% solution	Within minute	<1 hours	
Glucose	5% dextrose 10% dextrose 50% dextrose (1-2 ml/kg)			The combination of insulin with glucose may result in greater reduction in serum K <sup>+</sup> , but there is a risk of hypoglycemia
Insulin	0.55 - 1.1 U/kg regular insulin + dextrose (2g/unit of insulin)			Recommended to treat hyperkalemia in cats with urethral obstruction

Sodium bicarbonate (NaHCO <sub>3</sub> )	1-2 mEq/kg	Within 1 hours	Few hours	
Polystyrene sulfonate (Kayexalate)	PO/Rectal			Used to bind K <sup>+</sup> and release Na <sup>+</sup> in GI tract

### Exercise evaluation for Heart disease

Grade 1 : Walk for 1 hour  
(Healthy) Run for 15 mins

Grade 2 : Walk for 30 hour  
(Risk to Heart dz.) Run for 10 mins

\* Walk <30 mins or Run <10 mins => **Dangerous**

### Cryptochidism

Treatment : castration

### Cholangitis

Treatment : Antibiotics and Supplementation Vitamin B, E, K

**Feline FIV (+) with WBC $\downarrow$  : (Infectious?) BUN/Crea $\uparrow$  : Pre-renal, Renal, Post-renal**

Treatment : Heart and renal disease : Pimobendan  
: Immune stimulate : Interferon gamma (Inter-cat)  
: Infection : Antibiotics

Creatinine levels	Da y 1	Da y 2	Da y3	Note
<2	□	□	□	Do not need dose adjudgment
2-4	□		□	Give the usaul dose every other day
4-6	□			Give the usual dose every 2 days

**Sinus bradyarrhythmia with junctional escape beat**

ECG: No P wave with Normal QRS wave

Treatment : Atropine or Glycopyrrolate (IV) □ Continuous IV infusion of Isoproterenol or Dobutamine.

: If Atropine is not helpful □ Pro-Banthine maybe used for long-time management.

: Theophylline or Terbutaline may help to speed up heart rate.

: Right atrial pacing with a transvenous - pacing catheter is effective.

: Alternative choice for collapse treatment

: Gall stone powder 0.1 g + Sanchi ginseng 0.3 g (Mix) Dose : 0.1-0.2

g/pet

: Lizhi 0.25 ml/kg

: Thalidomide 5 mg/kg

**Inflammation**

Feature	Acute inflammation	Chronic inflammation
Onset	Fast : minute to hours	Slow : days, weeks, months
Cellular infiltrate	Mainly (Neutrophils)	Monocytes/ macrophage and lymphocytes
Tissue injury, fibrosis	Usually mild and self limited	Often severe and progressive
Local and systemic signs	Prominent	Less prominent : maybe subtle
Treatment	Physiotherapy : Heat/cold therapy Anti-Inflammation drugs : NSAIDs	Surgery, Physiotherapy, Anti-inflam drugs, Corticosteroids and other medications

**Taheebo** : Anticancer agent (Alternative cancer treatment)

Dose : 30-50 mg/kg

Indication : Cancer, Boosts the immune system, fungal and parasitic infections, Sexual infection, Inflammations, Chronic diseases, Stimulates digestion, AIDs, Improves blood health.

Interaction : Do not use taheebo with Anticoagulants.

### **Hypothyroid with demodicosis**

Treatment

- Fluralaner
- Levothyroxine replacement

### **Canine oral tumor (malignant melanoma was suspected)**

Treatment

- Tumor vaccine
- Immunotherapy: lymphocyte culture, inteferon
- Chemotherapy or radiation

### **Diarrhea (intestinal tumor was suspected)**

Treatment

- Active hexose correlated compound (AHCC) 4.5-6 g SID
- Enterococcus faecalis 12 (EF12)
- Crocodile blood
- Tahibo (beware diarrheal effect in some dog)

### **Cerebral edema**

Treatment

- Option 1
  - Acetazolamide
- Option 2
  - Nitorol
  - Taurine + CoQ10
  - Furosemide or glycerol

### **Allergy (periorbital edema)**

Treatment

- Ofloxacin eyes drop
- Antihistamine or steroid

### **Pyometra and mammary gland tumor**

Treatment

- Ovariohysterectomy
- Regional mastectomy

## **Feline mast cell tumor**

### Treatment

- most common splenic disease in cat
- Clinical sign: vomiting, anorexia, weight loss, GI ulcer, hemorrhage etc.
- Treatment: total splenectomy

## **Immune thrombocytopenic purpura (ITP)**

### Treatment:

- H.pylori positive
  - Manuka honey or antibiotic for kill H.pylori
- H.pylori negative
  - Splenectomy (before operation plt must >50,000 if emergency operation is needed gamma-globulin should be use)
  - Immunosuppressive drugs ex Prednisolone, beta-glucan+cholelith
  - Stem cells
  - Romiplastin 1-10 unit/kg 1 time/week SC (increase platelet production)
  - Elthrombopag plamine 12 mg/day PO (increase platelet production)
  - Danazol (stop menstruation)

## **Foreign body**

Treatment: enterotomy (remove foreign body from intestine) or endoscopy (for remove foreign body from stomach)

### Postoperative care

- Monitor patient closely for vomiting during recovery
- Supportive fluid and pain management
- Food and water should be give 4-12 hours postoperatively and start with easy digestible food for example i/d
- Do not give food while patient has ileus condition for preventing intuscusseption

## **Vonwillebrand's disease**

### Treatment

- Factor XIII injection (if Vonwillebrand's was suspected, factor XIII should give more than 1 time)
- Steroid + human globulin
- Blood transfusions

## **Inflammatory bowel disease**

### Treatment

- Option 1
  - Maropitant
  - Tyrosin or PIPC (following sensitivity test)
  - Food allergy test
- Option 2

- Steroid 0.5 ml/kg BID (dose decreasing 25% per week)
- Active hexose correlated compound (AHCC)
- Food trial
- Chinese medicine No.15

## **Glaucoma**

- Clinical sign
  - Increases intraocular pressure
- Treatment
  - Latanoprost 0.005% 1-2 drops every 20 minutes if IOP decreasing within 1-2 hours let the animal go home
  - Carbonic anhydrase inhibitors ex. Dorzolamide

## **Leiomyosarcoma**

Treatment : Surgery with biopsies

- Totally removed are usually not treated further.
- Partially removed, or there were signs of metastasis chemotherapy was recommended.

## **Puppy cystitis**

- Clinical finding: leukocytosis with pyurea
- Treatment: Antibiotics (ampicillin sulbactam)

Fluid supportive therapy

## **Neuropathy**

Treatment:

- Acupuncture
- Glycoaminoglycan

- Chinese medicine No. 30 and 68
- Steroid

## **Pancreatitis**

Treatment:

- Opioids analgesia
- Buscopan
- Cerenia
- Chinese medicine No. 68 and 100
- Serum
- Gall stone powder
- COenzyme
- Brenda z

## **Splenic mass**

Regenerative anemia with reticulocytosis is the result of

- Decreased EPO level (Hard to diagnosis)
- Internal hemorrhage : hemangiosarcoma can be cause of internal hemorrhage, splenectomy should be performed

Intrahepatic hemorrhage

Hepatomegaly with anemia suggest intrahepatic hemorrhage

- Anemia should treat immediately
- Hepatic biopsy should be performed

Feline calicivirus

- Don't have specific treatment
- supportive treatment and stress control are important for viral disease
- immunostimulant drugs : interferon
- Prevent secondary bacterial infection with low generation antibiotics

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