

Group 2



Case Senin

OPD No. 54-5068
27/05/56

Signalment

- Name : Senin
- Species : Canine
- Breed : Thai
- Color : Black
- Age : >10 years
- Sex : Female
- Weight : 17 kg



Owner complain

- Left cranial thoracic mammary gland swelling
- Anorexia

History taking

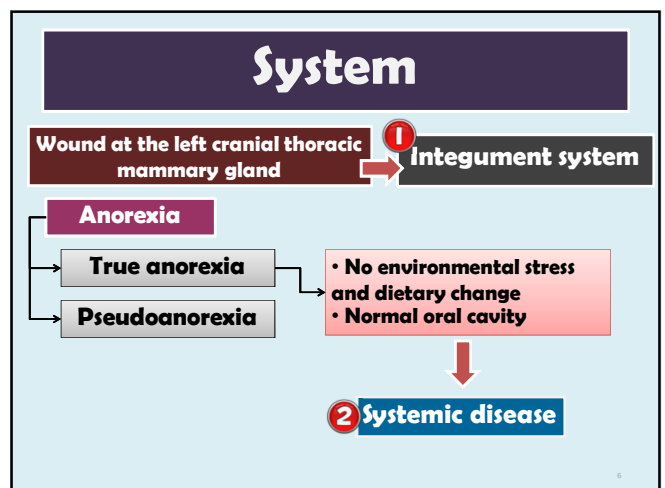
- Another dog one named Setan who was found *Ehrlichia canis* and renal disease.

Examination

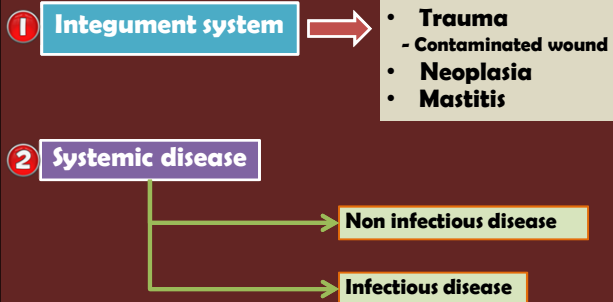
- Normal vital sign
- Wound and gangrene at the left cranial thoracic mammary gland

Problem list

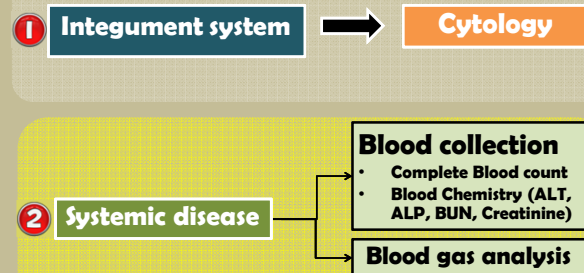
- Wound at the left cranial thoracic mammary gland
- Anorexia



Differential diagnosis



Investigation plan



Result

Integument system

Cytology

Cocci + Rod bacteria

Result

Systemic disease

Blood collection 1 (27/5/56)

		Normal value (canine)	Unit
Hb	14.3	12 – 18	g/dL
Hct	43.3	37 – 55	%
RBC	6.90	5.5 – 8.5	cell/mm ³
MCV	62.3	60 – 77	fL
MCHC	33.3	32 – 36	g/dL
Platelet	182	200 – 600	cell/mm ³
<i>Ehrlichia canis</i> positive			
Platelet adequate			

Result

Systemic disease

Blood collection 1 (27/5/56)

		Normal value (canine)	Unit
WBC	67.2 ↑	4.5-17	$\times 10^3$ cell/mm ³
Neutrophil	59.136 ↑	3.5-12	$\times 10^3$ cell/mm ³
Band	0.67 ↑	< 0.2	$\times 10^3$ cell/mm ³
Lymphocyte	3.36	0.9-3.5	$\times 10^3$ cell/mm ³
Monocyte	4.032 ↑	≤ 1.1	$\times 10^3$ cell/mm ³

Neutrophilia left shift with monocytosis
(Chronic inflammation leukogram pattern)

Result

Systemic disease

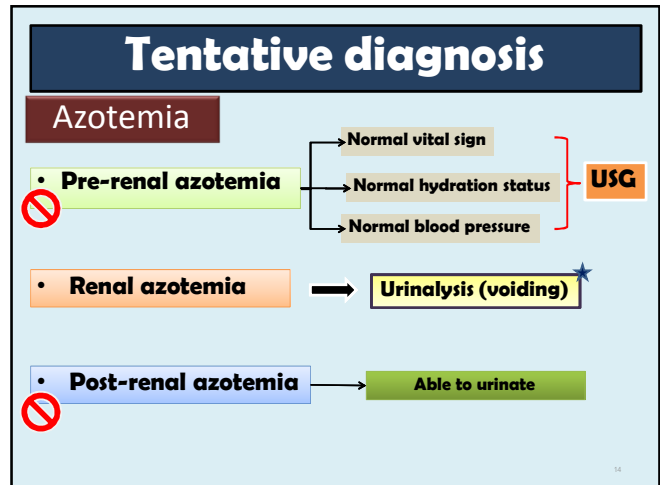
Blood gas analysis 1 (29/5/56)

		Reference ranges	Unit
pH	7.285 ↓	7.338 – 7.382	
pCO ₂	35.5	34.1 – 39.5	mmHg
pO ₂	42.5 ↓	75.0 – 100.0	mmHg
HCO ₃ ⁻	16.5 ↓	21.6 – 25.5	mmol/L
Na ⁺	126 ↓	145 – 154	mmol/L
K ⁺	5.20	4.5 – 5.6	mmol/L
Cl ⁻	92 ↓	105 – 116	mmol/L

Compensatory metabolic acidosis,
Normal Anion gap

Result				
Systemic disease				
Blood chemistry 1 (27/5/56)		Normal value (canine)	Unit	
TP	5.8	5.2 – 7.9	g/dL	
ALT	45	10 – 100	U/L	
ALP	96	20 – 120	U/L	
BUN	121 ↑	7 – 27	mg/dL	
CRE	3.1 ↑	0.5 – 1.5	mg/dL	
Blood chemistry 2 (30/5/56)				
Ca	5.6 ↓	7.6 – 11.6	mg/dL	
P	6.8 ↑	2.8 – 5.2	mg/dL	

Azotemia



Result			
Urinalysis 1 (30/5/56)		Reference ranges	
Color	Yellow		
Transparency	Clear		
Urine specific gravity	1.025	1.015 – 1.045	
Protein	Trace	Neg, trace	

Result	
Urinalysis 2 (31/5/56)	
- Urine protein 53 mg/dL - Urine creatinine 105 mg/dL	→ Urine protein/Urine creatinine ratio = 0.5 (normal < 0.4)
	proteinuria

Final diagnosis

- Renal azotemia → **Protein losing nephropathy**
- Ehrlichiosis
- Cocci + rod bacteria at the left cranial thoracic mammary gland.

Treatment plan

Systemic disease

Renal azotemia

- Fluid therapy** → **Acetate ringer's solution**
- Urine output** → **2.6 ml/kg/hr (polyuria)**
- Protect GI ulceration** →
 - Ranitidine 0.5 – 2 mg/kg i.v. q.8h.
 - Sucralfate 500 mg/dog p.o. a.c. (1 hour) q.6h.

Ehrlichiosis

Doxycycline 10mg/kg/day p.o. s.i.d for 28 days

Treatment plan

Proteinuria



Enalapril 0.25 - 1 ml/kg p.o.
q. 12-24h.

Hyperphosphatemia



Aluminum hydroxide 30-90 mg/kg/day

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Treatment plan

Integument system

- Broad spectrum antibiotic such as
 - Amoxicillin/clavulanic acid 8.75 mg/kg i.m. or s.c. q.24h.
 - Cephalexin 10-30 mg/kg p.o. q.8-12h.
- Drug sensitivity

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Monitoring

- Recheck complete blood count
- Blood chemistry analysis

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Monitoring

Complete blood count (3/6/56)

		Normal value (canine)	Unit
Hb	7.6	12 - 18	g/dL
Hct	23.0	37 - 55	%
RBC	3.60	5.5 - 8.5	cell/mm ³
MCV	63.8	60 - 77	fL
MCHC	33.4	32 - 36	g/dL
Platelet	244	200 - 600	cell/mm ³
Not found <i>Ehrlichia</i> spp.			

Moderate anemia

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Monitoring

Complete blood count (3/6/56)

	27/5/56	3/6/56 monitoring	Normal value (canine)	Unit
WBC	67.2	30.1	4.5-17	x10 ³ cell/mm ³
Neutrophil	59.136	27.09	3.5-12	x10 ³ cell/mm ³
Band	0.67	0.301	< 0.2	x10 ³ cell/mm ³
lymphocyte	3.36	1.806	0.9-3.5	x10 ³ cell/mm ³
Monocyte	4.032	0.903	≤ 1.1	x10 ³ cell/mm ³

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Monitoring

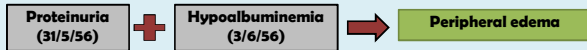
Blood chemistry analysis (3/6/56)

		Normal value (canine)	Unit
TP	5.8	5.2 - 7.9	g/dL
ALT	103	10 -100	U/L
ALP	602	20 -120	U/L
BUN	8	7 - 27	mg/dL
CRE	0.9	0.5 - 1.5	mg/dL
Albumin	2.1	2.7-4.2	g/dL

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Complication

1 Peripheral edema (30/5/56)



2 ALT & ALP ↑

3 Moderate anemia

Tentative diagnosis for complication

1 Peripheral edema (30/5/56)

- Decrease plasma oncotic pressure (protein loss)
- Reduce protein synthesis
 - liver failure
 - Malnutrition
- Increase plasma volume
 - Renal failure

2 ALT & ALP ↑

- Doxycycline & toxic
- *Ehrlichia canis*
- Liver disease

3 Moderate anemia

- Renal disease

Treatment plan for complication

1 Peripheral edema (30/5/56) → Enalapril 0.25 - 1 ml/kg p.o. q. 12-24h.

2 ALT & ALP ↑ → Silymarin 30 mg/kg/day

3 Moderate anemia → Erythropoietin 50-100 IU/kg s.c. 3 times a week

Prognosis

- Fair

Thank you for your kind attention

