

Clinical pathology diagnostic challenge : case #8

Signalment: 7 year old, neutered male Golden Retriever.

History: progressive weakness since yesterday, vomiting.

Physical exam observations: moderate dehydration.

CBC results

Hematocrit (0.37-0.55 L/L)	0.52
Hemoglobin (120-180 g/L)	167
Erythrocytes ($5.5-8.5 \times 10^{12}$ /L)	7.2
MCV (60-77 fL)	69
MCHC (320-360 g/L)	320
Reticulocytes (<1 %)	-
Reticulocytes ($<60\,000 \times 10^6$ /L)	-
Platelets ($200-900 \times 10^9$ /L)	352
Plasma protein (60-80 g/L)	60
Leukocytes ($6.0-17.0 \times 10^9$ /L)	14.0
Neutrophils (mature) ($3.0-11.5 \times 10^9$ /L)	13.6
Neutrophils (band) ($0-0.3 \times 10^9$ /L)	0
Lymphocytes ($1.0-4.8 \times 10^9$ /L)	0.3
Monocytes ($<1.4 \times 10^9$ /L)	0.1
Eosinophils ($0.1-1.3 \times 10^9$ /L)	0
Basophils (0 - rare $\times 10^9$ /L)	0

Clinical chemistry results

Glucose (3.38-6.88 mmol/L)	6.5
BUN (2.09-7.91 mmol/L)	27*
Creatinine (58-127 μ mol/L)	513*
ALT (4-62 U/L)	51
Alkaline phosphatase (6-80 U/L)	40
Total protein (56.6-74.8 g/L)	57.0
Albumin (29.1-39.7 g/L)	33.0
Globulins (23.5-39.1 g/L)	24.0
Calcium (2.38-3.00 mmol/L)	2.4
Phosphorus (0.75-1.70 mmol/L)	3.7
Potassium (3.82-5.34 mmol/L)	4.1
Sodium (143-154 mmol/L)	148
Chloride (108-117 mmol/L)	96
Total CO ₂ (17-25 mmol/L)	11.1
Anion Gap (12-24 mmol/L)	45.0

*The BUN and creatinine levels are retaken after fluid therapy and the results are respectively 37 μ mol/L and 734 μ mol/L.