

Clinical pathology diagnostic challenge : case #9

Signalment: Doberman, 9 year old intact female.

History: vomiting, weight loss, anorexia, polydipsia, weakness for about a week.

Physical exam observations: dehydration, purulent vaginal discharge.

CBC results

Hematocrit (0.37-0.55 L/L)	0.42
Hemoglobin (120-180 g/L)	140
Erythrocytes (5.5-8.5 x 10 ¹² /L)	6.10
MCV (60-77 fL)	69
MCHC (320-360 g/L)	333
Reticulocytes (<1 %)	-
Reticulocytes (<60 000 x 10 ⁶ /L)	-
Platelets (200-900 x 10 ⁹ /L)	265
Plasma protein (60-80 g/L)	101
Leukocytes (6.0-17.0 x 10 ⁹ /L)	96.0
Neutrophils (mature) (3.0-11.5 x 10 ⁹ /L)	69.1
Neutrophils (band) (0-0.3 x 10 ⁹ /L)	4.8
Lymphocytes (1.0-4.8 x 10 ⁹ /L)	2.9
Monocytes (<1.4 x 10 ⁹ /L)	18.2
Eosinophils (0.1-1.3 x 10 ⁹ /L)	1.0
Basophils (0 - rare x 10 ⁹ /L)	0

Clinical chemistry results

Glucose (3.38-6.88 mmol/L)	8.00
BUN (2.09-7.91 mmol/L)	36.30
Creatinine (58-127 µmol/L)	408
ALT (4-62 U/L)	19
Alkaline phosphatase (6-80 U/L)	114
Total protein (56.6-74.8 g/L)	84.5
Albumin (29.1-39.7 g/L)	30.3
Globulins (23.5-39.1 g/L)	54.2
Calcium (2.38-3.00 mmol/L)	3.00
Phosphorus (0.75-1.70 mmol/L)	3.32
Potassium (3.82-5.34 mmol/L)	4.90
Sodium (143-154 mmol/L)	125
Chloride (108-117 mmol/L)	91
Total CO ₂ (17-25 mmol/L)	21.4
Anion Gap (12-24 mmol/L)	17.5

Other tests

Specific gravity: 1.009

Using the laboratory changes, submit a differential diagnosis and justify it (pathophysiology).
If needed list other possible tests to confirm your diagnosis.