

Clinical pathology diagnostic challenge : case #18

Signalment: 3 year old intact male German Shepherd

History: Sudden exhaustion noticed two days ago, after a long walk in the park where the animal played a lot with other dogs.

Physical exam observations: icterus, weakness, marked splenomegaly.

Treatment: Received dexamethasone from the referring veterinarian.

CBC results*

	Day 1	Day 2
Hematocrit (0.37-0.55 L/L)	0.20	0.17
Hemoglobin (120-180 g/L)	77	65
Erythrocytes ($5.5-8.5 \times 10^{12}$ /L)	2.9	2.4
MCV (60-77 fL)	-	-
MCHC (320-360 g/L)	-	-
Nucleated red blood cells per 100 leukocytes	2	4
Reticulocytes ($<60\,000 \times 10^6$ /L)	$<60\,000$	72\,000
Platelets ($200-900 \times 10^9$ /L)	89	126
Plasma protein (60-80 g/L)	-	-
Leukocytes ($6.0-17.0 \times 10^9$ /L)	41.6	44.3
Neutrophils (mature) ($3.0-11.5 \times 10^9$ /L)	32.0	31.9
Neutrophils (band) ($0-0.3 \times 10^9$ /L)	0	2.2
Lymphocytes ($1.0-4.8 \times 10^9$ /L)	0	0.4
Monocytes ($<1.4 \times 10^9$ /L)	9.6	9.7
Eosinophils ($0.1-1.3 \times 10^9$ /L)	0	0
Basophils ($0 - \text{rare} \times 10^9$ /L)	0	0

- Moderate hemolysis noticed in each blood test tube.

Clinical chemistry changes

No tests were requested in this case.

Other tests:

Coombs negative

Coagulation tests:

Prothrombin time

Patient: 7.9 seconds

Control: 8.7 seconds

Partial thromboplastin time

Patient: 11.3 seconds

Control: 12.2 seconds

Fibrin or fibrinogen degradation products

(FDPs): 10-40 mg/dL

Urinalysis (catheter collection)

Color	orange
Turbidity	turbid
Specific gravity	> 1.035
pH	6.0
Protein	1+
Glucose	neg.
Ketone bodies	neg.
Bilirubin	3+
Blood	3+

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