

Contributors

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Blood from a young puppy with fever and weight loss

Signalment and History

A 6-month-old male intact Yorkshire Terrier dog presented for diagnostic work-up of lethargy, vomiting, anorexia, and weight loss of approximately 2.5 kilograms. The dog was purchased as a puppy a few months prior from a pet store in New York state; however, the breeder who supplied the puppy to the pet store was located in Kansas in the midwestern United States. At the time of purchase from the pet store, the patient was apparently healthy.

Physical Exam Findings

Physical examination revealed that the patient was febrile. Body condition score was 4/9 with diffuse muscle wasting noted. However, the demeanor of the patient was bright, alert, and responsive.

Laboratory Findings

Serum Biochemistry

Test	Results	Reference Interval	Units
Glucose	66 L	70-138	mg/dL
Urea nitrogen	14	6-25	mg/dL
Creatinine	0.7	0.5-1.6	mg/dL
Total protein	5.9	5.0-7.4	g/dL
Albumin	1.9 L	2.7-4.4	g/dL
Bilirubin, total	0.3	0.1-0.3	mg/dL
Alkaline phosphatase	154 H	5-131	U/L
ALT (SGPT)	26	12-118	U/L
AST (SGOT)	918 H	15-66	U/L
Cholesterol	198	92-324	mg/dL
Calcium	8.8 L	8.9-11.4	mg/dL
Phosphorus	4.2	2.5-6.0	mg/dL
Sodium	144	139-154	mEq/L
Potassium	3.8	3.6-5.5	mEq/L
Test	Results	Reference Interval	Units

Chloride	113	12-120	mEq/L
A/G	0.5 L	0.8-2.0	
Urea /creatinine ratio	20	4-27	
Globulin	4.0	1.6-3.6	g/dL
Lipase	153	77-695	U/L
Amylase	590	290-1125	U/L
Triglycerides	317 H	29-291	mg/dL
CPK	1870 H	59-895	U/L
GGTP	24 H	1-12	U/L
Magnesium	1.4 L	1.5-2.5	mEq/L
Total T4	0.5 L	1.0-4.0	µg/dL

Complete Blood Count (CBC)

Test	Results	Reference Interval	Units
Hemoglobin	10.3 L	12.1-20.3	g/dL
PCV	30.3 L	36-60	%
WBC	8.9	4.0-15.5	$\times 10^3/\mu\text{L}$
RBC	4.27 L	4.8-9.3	$\times 10^6/\mu\text{L}$
MCV	71	58-79	fl
MCH	24.1	19-28	pg
MCHC	34.0	30-38	g/dL
Platelet count	29 L	170-400	$\times 10^3/\mu\text{L}$
Differential cell count			
Segmented neutrophils	4272	2060-10600	/µL
Band neutrophils	1958 H	0-300	/µL
Metamyelocytes	89 H	0	/µL
Lymphocytes	2314	690-4500	/µL
Monocytes	178	0-840	/µL
Eosinophils	89	0-1200	/µL
Basophils	0	0-150	/µL

Review of a peripheral blood film confirmed the reported CBC data and also revealed mild polychromasia, poikilocytosis, and anisocytosis. The following structures were also noted.

Figure 1: Peripheral blood smear feathered edge, 50X objective, Wright's-Giemsa stain.

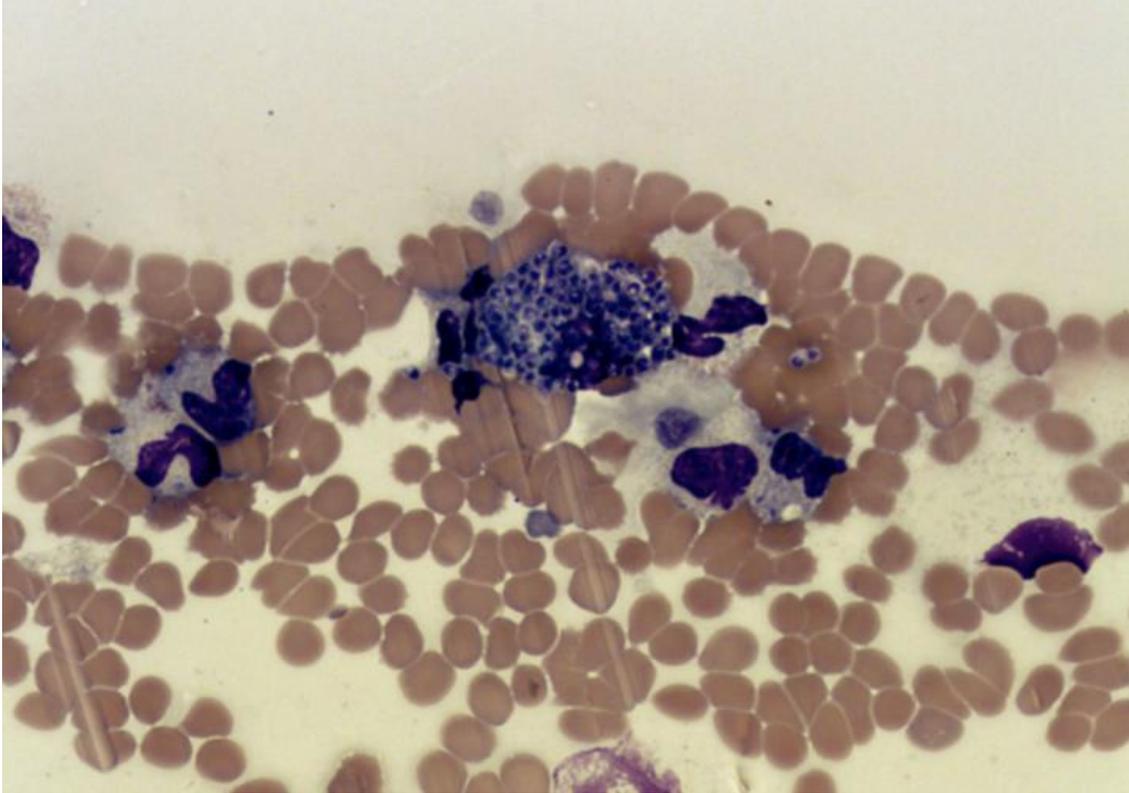
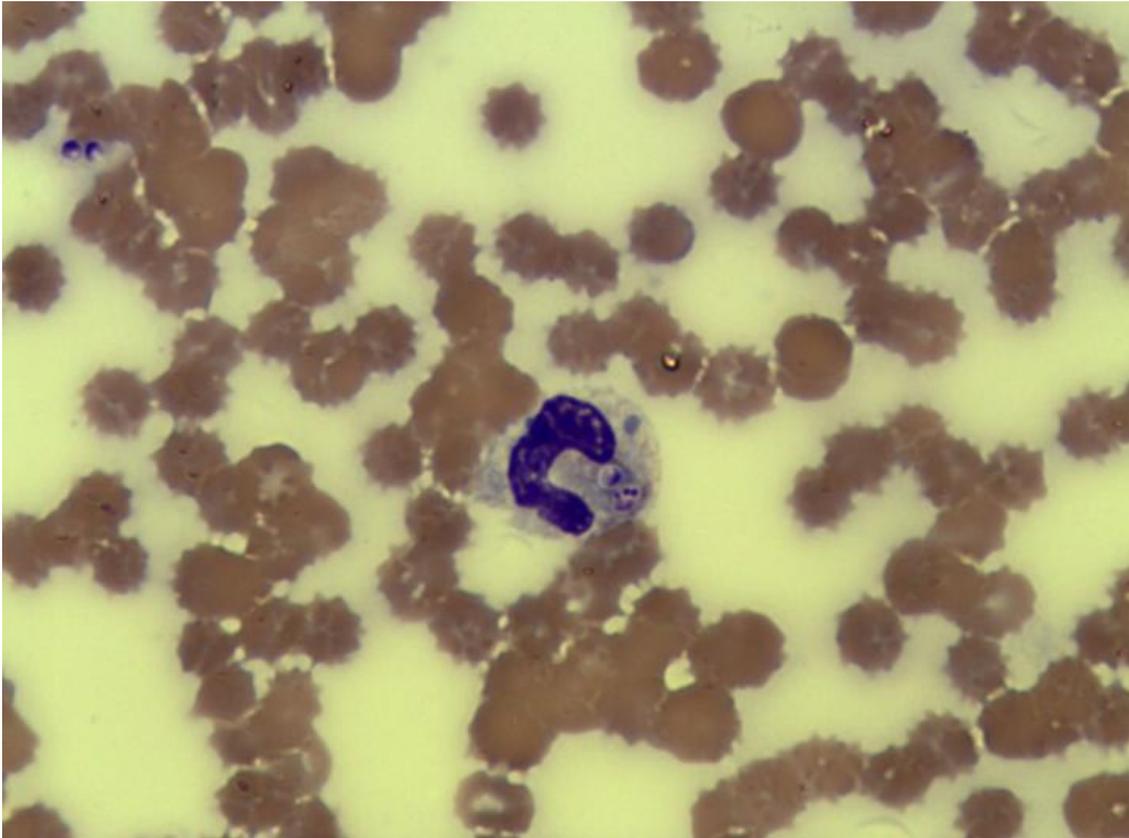


Figure 2: Peripheral blood smear, 100X objective, Wright's-Giemsa stain



Abdominal Ultrasound

Abdominal ultrasound revealed mottled splenomegaly, diffusely hyperechoic hepatomegaly, and moderate hypoechoic mesenteric lymphadenopathy (more than expected for a normal puppy). Remainder of the ultrasound was unremarkable; the gastrointestinal tract appeared normal; the bowel mucosa was determined to be within normal limits. A repeat CBC performed immediately prior to abdominal ultrasound and collection of aspirates revealed similar findings to the initial CBC with the exception that the platelet count was 220,000 per microliter. The automated platelet count was confirmed by visual inspection of a blood smear (the estimated platelet count was 150-200,000 per microliter). After determining that the patient was no longer thrombocytopenic and with no other evidence of hemorrhagic tendencies, aspirates of liver, spleen, and lymph node were collected and submitted for cytology.