

Interesting haemogram in a young DSH cat

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Signalment:

7 month-old male neutered DSH

History:

The owner reported inappetance and a swaying gait.

Clinical examination

Clinical examination revealed fever (41°C), hindlimb weakness and ataxia, and oral ulceration and gingivitis.

The cat was unvaccinated.

A blood sample was collected and sent to the InVitro Laboratory for haematology and biochemistry.

Selected laboratory results from the initial presentation are presented in Table 1

Table 1: Laboratory data Day 1

PARAMETER	Day 1	Reference interval
Hct	0.40	0.28-0.47
RBC	9.6	5.5-10.0 x 10 ¹² /L
Hb	119	80-170 g/L
MCV	40	40-55 fl
MCHC	300	310-340 g/L
WBC	1.0	6.0-15.0 x 10 ⁹ /L
Segmented neutrophils	0.2	3.6-10.50 x 10 ⁹ /L
Lymphocytes	0.7	1.0-3.20 x 10 ⁹ /L
Monocytes	0.0	0.0-0.60 x 10 ⁹ /L
Eosinophils	0.1	0.0-0.60 x 10 ⁹ /L
Basophils		0.0-0.30 x 10 ⁶ /L
Thrombocytes	314	200-450 x 10 ⁹ /L
Total protein	85	60-75 g/L
Albumin	31	26-36 g/L
Globulin	54	35-42 g/L

FCoV (IFAT)	negative	
FIV(IC)	negative	
FeLV(ELISA)	negative	

The referring veterinarian subsequently requested a Feline Parvovirus (FPV) titre.

Result: **FPV (IFAT): 1:640 positive**

Five days later the female littermate from the same household of the animal in question presented with similar clinical signs, although without any hindlimb ataxia or weakness. She had been vaccinated once 3 months previously (Feline Rhinotracheitis, Feline Panleukopaenia, Feline Calicivirus) and the course was not completed. A FPV IFAT performed subsequently for this cat revealed a titre of **1:1280**.

Both cats were treated with omega interferon (Virbagen® Omega, Virbac) and seen 10d days later. The hindlimb ataxia noted in the male cat persisted.

Another blood sample was taken from the male cat and sent to our lab. The results can be seen in Table 2. Thirty-five days after first presentation the patient was again examined by the referring veterinarian and a third blood sample evaluated, the results of which are also presented in Table 2.

Table 2: Laboratory data day 10 and day 35

PARAMETER	Day 10	Day 35	Reference interval
Hct	0.29	0.38	0.28-0.47
RBC	6.8	11.1	5.5-10.0x10 ¹² /L
Hb	100	144	80-170 g/L
MCV	42	34	40-55 fl
MCHC	350	380	310-340 g/L
WBC	10.8	17.6	6.0-15.0 x 10 ⁹ /L
Differential			
Band neutrophils	0.0	0.2	0.0-0.6 x 10 ⁹ /L
Segmented neutrophils	7.6	9.5	3.6-10.5 x 10 ⁹ /L
Lymphocytes	2.2	3.9	1.0-3.2 x 10 ⁹ /L
Monocytes	0.8	1.4	0.0-0.6 x 10 ⁹ /L
Eosinophils	0.1	2.5	0.0-0.6 x 10 ⁹ /L
Basophils	0.1	0.2	0.0-0.3 x 10 ⁹ /L
Thrombocytes	3448	4990^a	200-450 x 10 ⁹ /L
Total protein	n.d.	79	60-75 g/L
Albumin	n.d.	30	26-36 g/L
Globulin		49	35-42 g/L

Iron		1.8	1.8-3.2 $\mu\text{mol/L}$
FeLV (IC)		negative	
FCoV (IFAT)		negative	
FPV (IFAT)		1:2560	
Toxoplasma gondii (DA)	1:40	1:40	Borderline titre 1:40
Feline Calicivirus	n.d.	1:320	Borderline titre 1:40
Feline Rhinotracheitis virus	n.d.	negative	

^amanual count using a Neubauer haemocytometer.

Figure 1 shows the CellDyn 3500 histogram for the blood sample from day 10 and Figure 2 is a photograph taken of the sample after centrifugation.

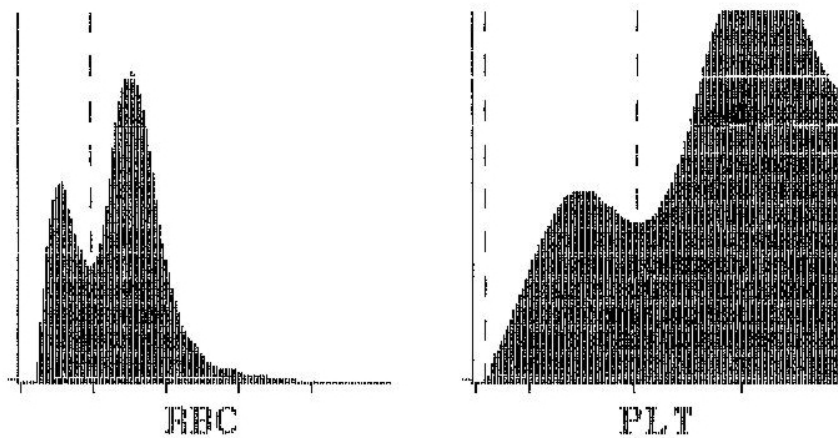


Figure 1: CellDyn 3500 histogram, sample day 10

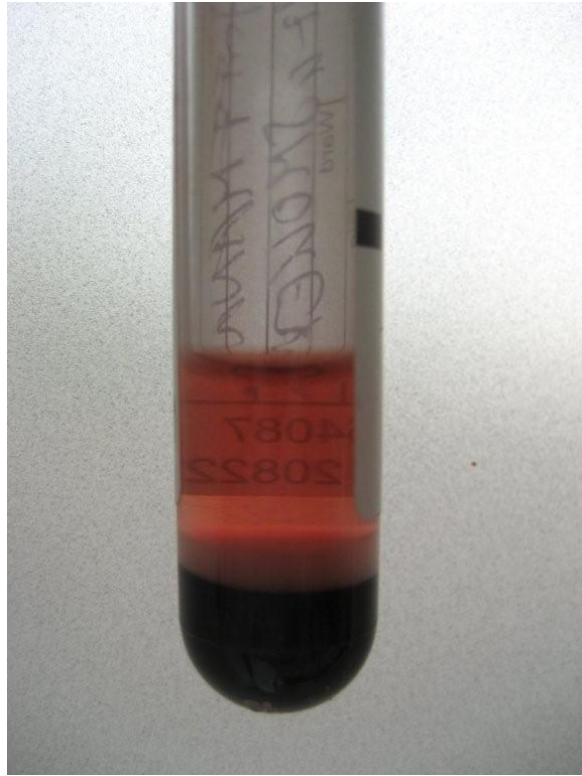


Figure 2: Centrifuged blood sample, day 10.

Question: What are the differential diagnoses for the major abnormality found in the blood samples on both days 10 and 35, and how would you differentiate between these conditions?