

Anaemia in a Cat

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Signalment

A 12yr male castrated Domestic Shorthair cat

History

He was presented to his usual vet with a history of weight loss, polyuria, polydipsia and hiding away from his owners.

Clinical examination

The veterinarian noted very pale mucous membranes.

The cat was fully vaccinated against feline panleukopaemia (FPV), feline calicivirus (FCV), feline viral rhinotracheitis (FVR), feline leukaemia virus (FeLV) and rabies. The last vaccination had taken place more than a year previously.

An abdominal ultrasound revealed a bilateral nephrosis and mild splenomegaly.

A blood sample was taken and sent to the In Vitro Laboratory for further investigation.

Laboratory results

The data from the initial and selected subsequent blood samples are presented in Table 1.

Table 1: Sequential laboratory data for the feline patient

<i>PARAMETER</i>	<i>Day 1</i>	<i>Day 9</i>	<i>Day 28</i>	<i>Day 51</i>	<i>Reference range</i>
Hct	0.2	0.24	0.16	0.26	0.28-0.47
RBC	3.9	4.4	3.4	5.5	5.5-10.0x10 ¹² /L
Hb	63	69	54	76	80-170 g/L
MCV	51	54	48	47	40-55fl
MCHC	320	290	330	300	310-340g/L
WBC	6.4	7.1	6.1	8.2	6.0-15.0x10 ⁹ /L
Reticulocytes	164	31	48	22	28-50x10 ⁶ /L
Total protein	129	105	107	101	60-75g/L
Urea	32.0	n.d.	n.d.	30.5	3.3-13.7mmol/L
Creatinine	320	n.d.	n.d.	380	0-140µmol/L
Comment	Sample haemolytic, autoagglutination	Sample haemolytic, autoagglutination	Sample haemolytic, autoagglutination	Sample haemolytic, autoagglutination	

The following photographs are taken from blood smears examined on Day 9 and Day 51.

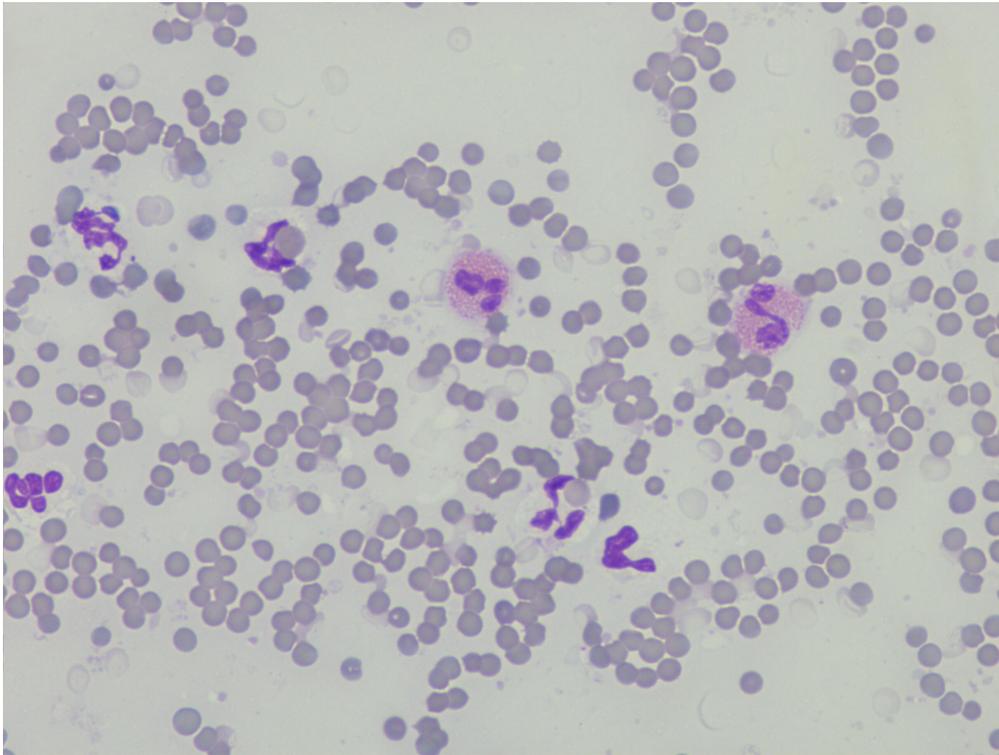


Fig. 1: Blood smear; Day 9, 400x magnification.

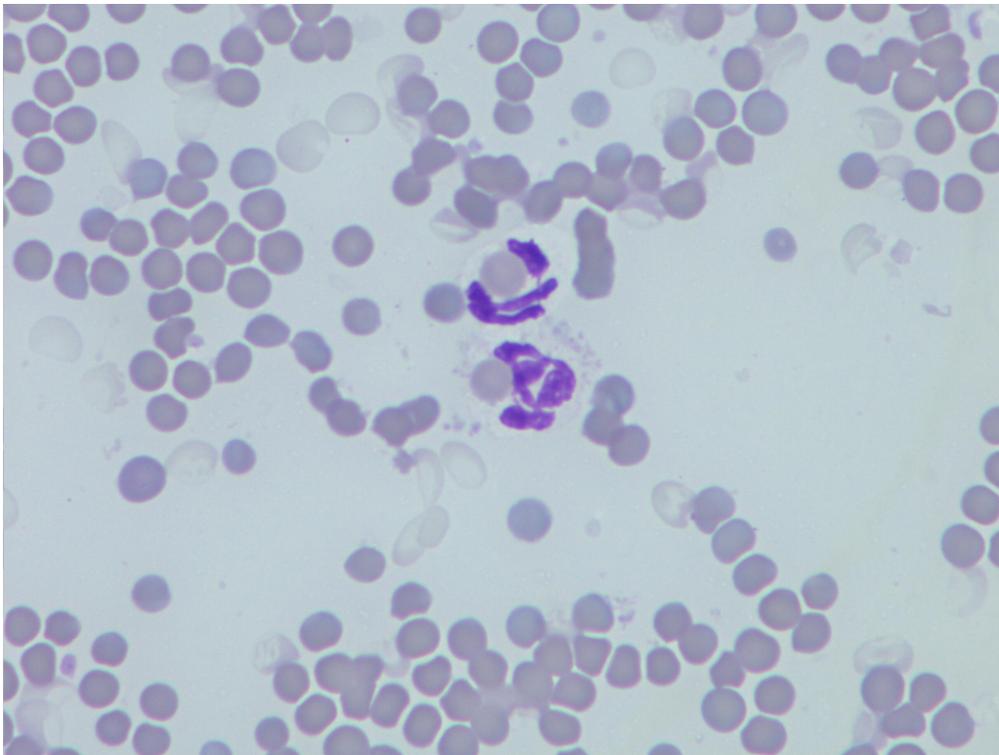


Fig. 2: Blood smear; Day 9, 1000x magnification.

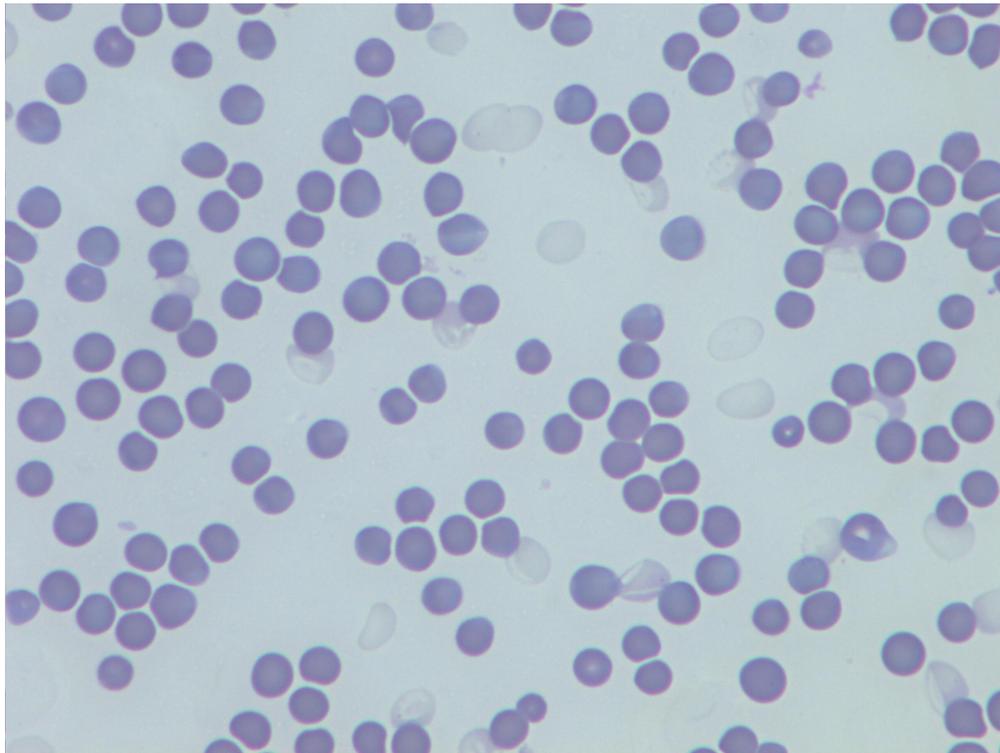


Fig. 3: Blood smear; Day 51, 1000x magnification.

Table 2: Serological tests

FIV	negative (IC)
FeLV	negative (ELISA)
Feline corona virus	1:10 (IFAT)
<i>Mycoplasma haemofelis</i>	negative (PCR)
<i>Candidatus Mycoplasma haemominutum</i> ,	negative (PCR)
<i>Candidatus Mycoplasma turicensis</i>	negative (PCR)
<i>Ehrlichia canis</i> , <i>Babesia canis</i>	negative (IFAT)
<i>Anaplasma phagocytophilum</i>	negative (IFAT)

Additional tests:

Erythrocyte osmotic fragility (day 140): 0.70% (normal range 0.48-0.58%)

Coombs' test: 1:64 positive at 37°C and 4°C.

ANA (IFAT): negative

The cat's veterinarian reported a 4+ positive reaction for haeme on an in-house urine dipstick; sediment examination was negative for red blood cells, leading to a diagnosis of haemoglobinuria. Unfortunately no further data regarding urinalysis (e.g., specific gravity) could be obtained.

Questions:

- What is your haematological diagnosis?
- What is the pathophysiology underlying the abnormalities seen in the blood smears above?