

HAEMATOLOGICAL CHANGES IN A CAT

F. Granat, A. Geffré, N. Bourgès Abella, C. Trumel.

Laboratoire Central de Biologie Médicale, Institut National Polytechnique-Ecole Nationale Vétérinaire, Toulouse, France.

Signalement:

A 7 year-old neutered female domestic shorthair cat.

Clinical History:

The cat was presented because of the ingestion of a bone. No abnormalities were noted at the examination, and an abdominal radiography showed the presence of a bone in stomach. A medical treatment composed of a leek-based high fiber diet and non steroidal anti-inflammatory drugs was decided to try naturally eliminating it. At the following presentation, eight days later, no abnormality in the behaviour of the cat was reported by the owners.

Clinical findings:

At the second clinical presentation, the cat was bright, alert and did not present abdominal pain. The only significant clinical findings were pale mucous membranes and a slight hepatomegaly.

Diagnostic procedures:

Abdominal radiography and ultrasound suggested that the bone had been eliminated. Complete blood cell count, blood film, biochemical and urine analysis were performed. Results are in tables 1, 2 and 3.

Table 1: Hematology results obtained with the Sysmex XT-2000iV® (Sysmex)

Analytes	Data	Reference Interval
HGB (g/dL)	5.7	8.0-14.9
RBC ($\cdot 10^{12}/L$)	3.4	5.5-10
HCT (L/L)	0.18	0.24-0.45
MCV (fL)	52.1	40-55
MCH (pg)	16.8	13-17
MCHC (g/dL)	32.2	30-36
PLT ($\cdot 10^9/L$)	285	300-800
WBC ($\cdot 10^9/L$)	22.31	5.5-19.5
Neutrophils ($\cdot 10^9/L$)	19.6	2.5-12.5
Lymphocytes ($\cdot 10^9/L$)	1.56	1.5-7.0
Monocytes ($\cdot 10^9/L$)	0.67	0.0-0.85
Eosinophils ($\cdot 10^9/L$)	0.22	< 1.5
Reticulocytes (/L)	209 100	< 110 000
PCR analysis (<i>Mycoplasma haemofelis</i> and <i>Candidatus Mycoplasma haemominutum</i>)	Negative	Negative

Figure 1: Sysmex XT 2000iV[®] optical platelet (PLT-O) cytogram from the blood sample of the cat

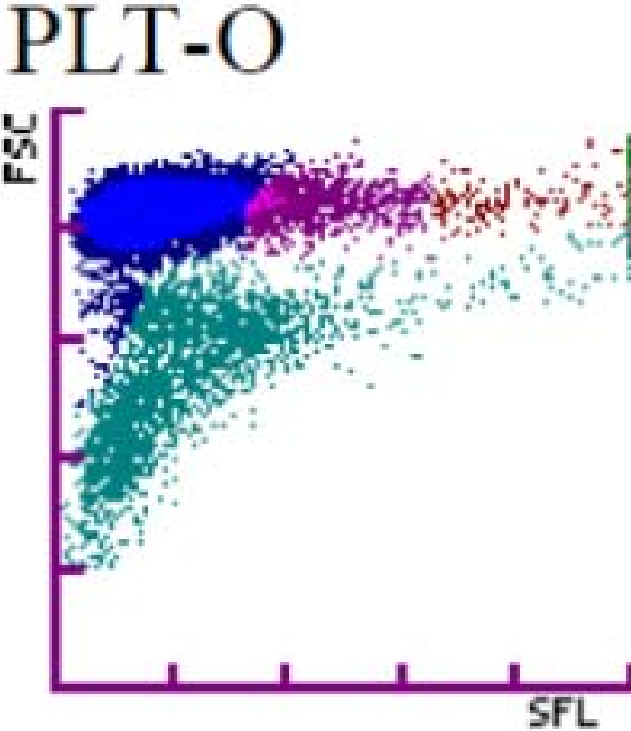


Figure 2: Picture of the blood smear's edge (x 1000, oil, modified May-Grünwald Giemsa stain).

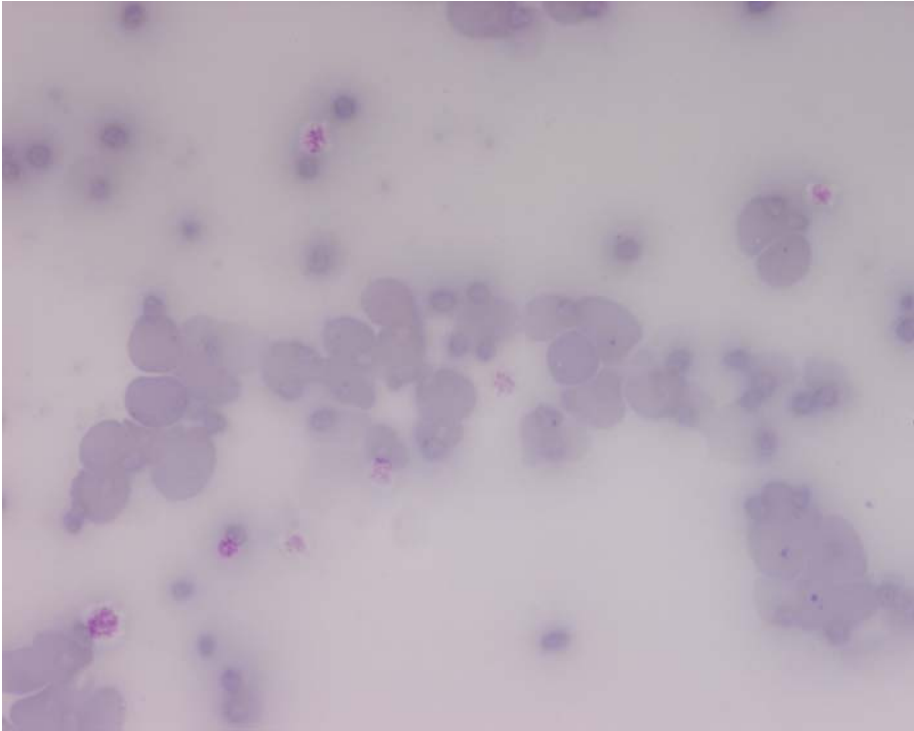


Table 2: Urine analysis results

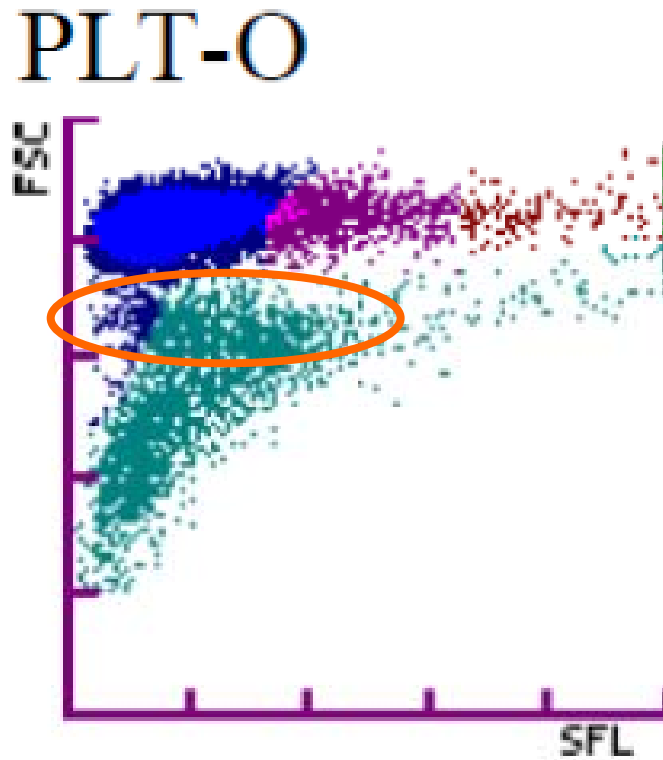
Analytes	Data	Reference Interval
Source	Cystocentesis	-
Color	Dark red	Clear yellow
DU	1.025	1.030-1.060
Sediment	Neg	< 5 cells / 40 PF
Dipstick	Unreadable	-

Table 3: Biochemistry results on plasma obtained with VetTest® (Idexx Laboratories)

Analytes	Data	Reference Interval
Color of the plasma	Red	Clear
Creatinine (µmol/L)	56	27-186
ALT (U/L)	146	20-100
PAL (U/L)	21	10-90
GGT (U/L)	Not performed	
Total Bilirubin (µmol/L)	13.0	1.7-9.9
Total Protein (g/L)	75	50-82
Albumin (g/L)	30	22-44

Questions and tasks:

1. Interpret and explain the changes in the PLT-O dot plot indicated by the orange circle. Use appearance of the blood smear and other information to aid in interpretation.



2. What is the most probable hypothesis for the type of anemia observed in this cat?

3. Give the most probable diagnosis.