

SUPPORTING INFORMATION

Severe pleural effusion due to feline infectious peritonitis in a cat[†]

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S1 Hematology and blood biochemistry test before treatment

Hematological analysis revealed decrease in hemoglobin (HGB), hematocrit (HCT), mean corpuscular volume (MCV), and mean corpuscular hemoglobin (MCH), indicating microcytic normochromic anemia. Serum biochemistry showed total protein (TP) at the upper limit, hyperglobulinemia, a decreased in the albumin-to-globulin ratio (A:G) to 0.39, elevated aspartate aminotransferase (AST), hyperglycemia (GLU), and hypocalcemia (Ca). This finding supports the diagnosis of acute feline infectious peritonitis in cats, a condition that causes pleural effusion.

Table S1. Hematological and blood biochemistry findings in the cat before treatment

Parameter	Normal	Result	Unit
Hematology Test			
WBC	5.5 – 19.5	11.2	10 ³ /μL
Lymph#	0.8 – 7	3.0	10 ³ /μL
Mid#	0.0 – 1.9	1.5	10 ³ /μL
Gran#	2.1 – 15	6.7	10 ³ /μL
RBC	4.6 – 10	5.74	10 ⁶ /μL
HGB	9.3 – 15.3	7.1 ↓	g/dl
HCT	28 – 49	22.3 ↓	%
MCV	39 – 52	38.9 ↓	fl
MCH	13 – 21	12.3 ↓	pg
MCHC	30 – 38	31.8	g/dl
PLT	100 – 514	185	10 ³ /μL
Blood Biochemistry Test			
Albumin	22 – 44	25.1	g/L
Total Protein	57 – 89	88.5	g/L
Globulin	23 – 52	63.5 ↑	g/L
Albumin/Globulin Ratio		0.39	
Total Bilirubin	0 – 15	1.6	umol/L
Aspartate Aminotransferase	0 – 48	59 ↑	U/L
Alanine Aminotransferase	5 – 130	33	U/L
Amylase	500 – 1500	1481	U/L
Creatine Kinase	0 – 559	178	U/L
Creatinine	44 – 212	69.5	umol/L
Blood Urea Nitrogen	4 – 12.90	4.62	umol/L
Blood Urea Nitrogen/Creatinine Ratio	27.000 – 182.000	66.444	
Glucose	4.11 – 8.83	9.81 ↑	mmol/L
Triglycerides	0 – 1.13	0.87	mmol/L
Calcium	1.95 – 2.83	1.90 ↓	mmol/L
Phosphate	1 – 2.42	1.17	mmol/L

References:

Weiss DJ, Wardrop KJ, editors. 2011. Schalm's veterinary hematology. John Wiley & Sons.

S2 Hematology and blood biochemistry test after treatment

After thoracocentesis and treatment were performed, and the cat's hematology and blood biochemistry were re-evaluated 40 days post-treatment. Hemoglobin (HGB), hematocrit (HCT), and mean corpuscular hemoglobin (MCH) levels increased, although they remained below normal limits. While blood chemistry values had returned to normal, the albumin-to-globulin ratio (A:G) increase to 0.56, and the patient respiration normalized.

Table S2. Hematological and blood biochemistry findings in the cat, 40 days post-treatment

Parameter	Normal	Result	Unit
Hematology Test			
WBC	5.5 – 19.5	5.9	10 ³ / µL
Lymph#	0.8 – 7	1.3	10 ³ / µL
Mid#	0.0 – 1.9	0.5	10 ³ / µL
Gran#	2.1 – 15	4.1	10 ³ / µL
RBC	4.6 – 10	6.97	10 ⁶ / µL
HGB	9.3 – 15.3	8.9 ↓	g/dl
HCT	28 – 49	27.2 ↓	%
MCV	39 – 52	39.1	fl
MCH	13 – 21	12.7 ↓	pg
MCHC	30 – 38	32.7	g/dl
PLT	100 – 514	192	10 ³ / µL
Blood Biochemistry Test			
Albumin	22 – 44	26.1	g/L
Total Protein	57 – 89	72.4	g/L
Globulin	23 – 52	46.2	g/L
Albumin/Globulin Ratio		0.56	
Total Bilirubin	0 – 15	<0.1	umol/L
Aspartate Aminotransferase	0 – 48	5	U/L
Alanine Aminotransferase	5 – 130	66	U/L
Amylase	500 – 1500	1475	U/L
Creatine Kinase	0 – 559	358	U/L
Creatinine	44 – 212	81.5	umol/L
Blood Urea Nitrogen	4 – 12.90	6.68	umol/L
Blood Urea Nitrogen/Creatinine Ratio	27.000 – 182.000	81.940	
Glucose	4.11 – 8.83	6.40	mmol/L
Triglycerides	0 – 1.13	0.76	mmol/L
Calcium	1.95 – 2.83	2.12	mmol/L
Phosphate	1 – 2.42	1.36	mmol/L

References:

Weiss DJ, Wardrop KJ, editors. 2011. Schalm's veterinary hematology. John Wiley & Sons.

S3 Thoracocentesis treatment and rapid FIPV antibody test

The accumulation of fluid in the patient's thoracic cavity is significant enough to causes dyspnea. In acute FIP, numerous blood vessels are affected and leak, leading up to fluid accumulation. Thoracocentesis is performed to remove the fluid and restore normal breathing. The extracted fluid is also used for a rapid FIPV antibody test, which yields positive results.

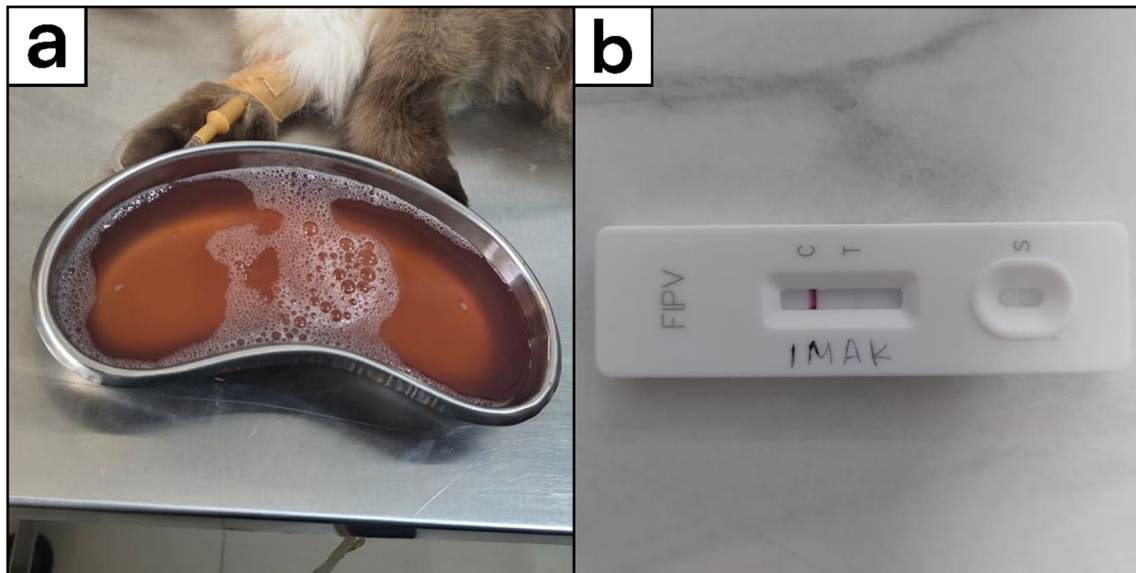


Figure S3. (a) Fluid extracted from patients undergoing thoracocentesis, (b) Results of rapid FIPV antibody tests