Cat, ESH, 13 years old, castrated male, presented due to lethargy, inappetence and vomiting

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Signalement

European Shorthair cat, male-castrated, 13 years.

Anamnesis

The cat had outdoor access and was regularly vaccinated and dewormed. There were no other cats in the household. The cat was presented to the Clinic for Small Animals, Freie Universität Berlin, with a four-day-history of lethargy and vomiting. There was no diarrhea. Five days ago, the cat had eaten so called “trail mix”, containing nuts, raisins and dried fruits and was presented to the referring veterinarian initiating treatment with maropitant and amoxicillin. The cat was referred to the Clinic for Small Animals FU Berlin due to progression of clinical signs, with continued vomiting, and is now unable to stand and walk since the morning of the day of presentation.

Clinical findings

The cat was presented in lateral position, not being able to stand or walk ~~around~~. The mucous membranes were pale and dry, the capillary refill time was not possible to evaluate. The breathing rate was 40/min (costo-abdominal), the pulse frequency 200/min in bad quality. There was a systolic heart murmur grade IV/VI predominately in the left thoracic area with the punctum maximum at the intercostal area V. The rectal temperature was not measurable low (< 34.5 °C). The abdomen was not evaluable. The bodyweight was 7.45 kg. The blood pressure was 65 mmHg measured non-invasively by Doppler measurement.

Laboratory findings

Table 1. Hematology results (Sysmex XT-2000i, Sysmex Deutschland GmbH, Norderstedt, Germany) in a 13 years old European Shorthair cat presented due to vomiting and inappetence

Parameter	Value	Reference interval	Unit
WBC	16.03	6-11	X 10^9/L
RBC	8.63	5-10	X 10^{12}/L
HGB	12.7	9-15	g/dL
HCT	0.37	0.3-0.44	L/L
MCV	44	40-55	fL
MCH	14.7	13-16	g/dL
MCHC	33.8	31-36	g/dL
PLT	326	180-550	X 10^9/L

Table 2. Hematology results obtained by a manual differential count in a 13 years old European Shorthair cat presented due to vomiting and inappetence

Parameter	Day 0	Reference interval	Unit
Seg. neutrophils	14.9	3-11	X 10^9/L
Band neutrophils	0.481	0-0.5	X 10^9/L
Lymphocytes	0.481	1-4	X 10^9/L
Monocytes	0.16	0.04-0.5	X 10^9/L
Eosinophils	0	0.04-0.6	X 10^9/L
Basophils	0	0-0.04	X 10^9/L
Anisocytosis	negative	negative	-
Polychromasia	negative	negative	-

Table 3. Biochemical results (Access-Analyzer Kone Lab 30i, Thermo Clinical Labsystem, Dreieich, Germany) in a 13 years old European Shorthair cat presented due to vomiting and inappetence

Parameter	Day 0	Reference interval	Unit
Sodium	128	145-158	mmol/L
Potassium	3.7	3.6-4.8	mmol/L
Chloride	93	110-130	mmol/L
Glucose	4.6	5-10	mmol/L
Creatinine	538	53-168	µmol/L
Urea	48.1	5-11.3	mmol/L

Calcium	0.95	2.3-3	mmol/L
Phosphorus	2.1	0.9-1.9	mmol/L
ALT	93	< 70	U/L
AP	24	< 76	U/L
AST	235	< 30	U/L
Bilirubin	16.8	0-3.4	µmol/L
Total Protein	76	57-78	g/L
Albumin	26.2	26-40	g/L
DGGR-lipase	91	19-27	U/L

Table 4: Blood gas analysis in a 13 years old European Shorthair cat presented due to vomiting and inappetence

Parameter	Day 0	Reference interval	Unit
pH	7.54	7.32-7.43	
pCO_2	39	32.7-44.7	mmHg
pO_2	33	32.7-44.7	mmHg
HCO^{3-}	34.3	22-29	mmol/L
BE	11.4	0 +/- 4	mmol/L

Additionally, a coagulation profile was performed with the PT being in reference range (28.1 sec., reference interval: 21-30 sec,) and a prolonged aPTT (26.3 sec., reference range 11-14.5 sec.).

Urinanalysis revealed the following:
specific gravity: 1.050
pH 5.0
protein: +
blood: ++
All other chemistries: negative
U-sediment: moderate amount of erythrocytes, otherwise unremarkable

Questions

How do you explain the azotemia and hyponatremia?

How do you classify the acid-base-disturbances?

Taking all the blood results in consideration, suggest the most likely diagnosis including differential diagnoses.