

Clinical pathology diagnostic challenge : case #16

Signalment: 15 year old, Arabe / Quarterhorse gelding.

History: Abdominal discomfort.

Physical exam observations: Increased TPR, icterus, severe colic.

CBC results

Hematocrit (0.32-0.52 L/L)	0.34
Hemoglobin (111-190 g/L)	128
Erythrocytes ($6.5-12.5 \times 10^{12}$ /L)	-
MCV (34-58 fL)	40
MCHC (310-370 g/L)	320
Platelets ($100-600 \times 10^9$ /L)	adequate
Plasma protein (55-70 g/L)	-
Fibrinogen (< 4 g/L)	8
Leukocytes ($5.5-12.5 \times 10^9$ /L)	7.5
Neutrophils (mature)($2.7-6.7 \times 10^9$ /L)	5.3
Neutrophils (band) ($0-0.1 \times 10^9$ /L)	0
Lymphocytes ($1.5-7.5 \times 10^9$ /L)	2.0
Monocytes (< 0.8×10^9 /L)	0.2
Eosinophils (< 0.9×10^9 /L)	0
Basophils (0 - rare $\times 10^9$ /L)	0

Clinical chemistry results

Glucose (3.4-6.2 mmol/L)	6.0
BUN (4.1-7.6 mmol/L)	6
Creatinine (87-150 μ mol/L)	150
Bilirubin (15-48 μ mol/L)	272
GGT (9-30 U/L)	60
Alkaline phosphatase (67-185 U/L)	159
AST (182-384 U/L)	153
CK (80-444 U/L)	-
Total protein (53-71 g/L)	88
Albumin (31-39 g/L)	38
Globulins (20-35 g/L)	50
Calcium (2.89-3.30 mmol/L)	2.6
Phosphorus (0.77-1.67 mmol/L)	1.0
Potassium (3.36-4.99 mmol/L)	3.0
Sodium (135-143 mmol/L)	131
Chloride (95-105 mmol/L)	83
Total CO ₂ (27-34 mmol/L)	28
Anion Gap (4-13 mmol/L)	23

Cytology (Abdominal tap)

Appearance	yellow, turbid
Proteins	20 g / L
Leukocytes	11.6×10^9 / L

Urinalysis (free catch)

Color	Dark yellow
Turbidity	2+
Specific gravity	1.003
pH	8.0
Proteins	negative
Glucose	1+
Ketone bodies	negative
Bilirubin	4+
Blood	250 Ery/ μ L

Using the laboratory changes, submit a differential diagnosis and justify it (pathophysiology). If needed list other possible tests to confirm your diagnosis.