

Clinical pathology diagnostic challenge : case #12

Signalment: one day old, female Thoroughbred foal.

History: bloody diarrhea since 10 hrs of age, treated with fluids, received a blood transfusion, given banamine and gentamicine.

Physical exam observations: marked weakness, dehydration, hypothermia, severe bloody diarrhea.

CBC results

Hematocrit (0.32-0.52 L/L)	0.39
Hemoglobin (111-190 g/L)	120
Erythrocytes ($6.5-12.5 \times 10^{12}$ /L)	7.5
MCV (34-58 fL)	37
MCHC (310-370 g/L)	362
Platelets ($100-600 \times 10^9$ /L)	80
Plasma protein (55-70 g/L)	46
Fibrinogen (< 4 g/L)	3
Leukocytes ($5.5-12.5 \times 10^9$ /L)	2.4
Neutrophils (mature) ($2.7-6.7 \times 10^9$ /L)	1.1
Neutrophils (band) ($0-0.1 \times 10^9$ /L)	0
Lymphocytes ($1.5-7.5 \times 10^9$ /L)	1.3
Monocytes (< 0.8×10^9 /L)	0
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)	7.5
BUN (4.1-7.6 mmol/L)	10
Creatinine (87-150 μ mol/L)	270
Bilirubin (15-48 μ mol/L)	-
GGT (9-30 U/L)	21
Alkaline phosphatase (67-185 U/L)	610
AST (182-384 U/L)	303
CK (80-444 U/L)	6 321
Total protein (53-71 g/L)	43.0
Albumin (31-39 g/L)	28.0
Globulins (20-35 g/L)	15.0
Calcium (2.89-3.30 mmol/L)	3.05
Phosphorus (0.77-1.67 mmol/L)	3.25
Potassium (3.36-4.99 mmol/L)	3.50
Sodium (135-143 mmol/L)	132
Chloride (95-105 mmol/L)	87
Total CO ₂ (27-34 mmol/L)	10
Anion Gap (4-13 mmol/L)	38.5

Plasma immunoglobulins :

200-400 mg/ml
(normal > 800 mg/ml)

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