

Clinical pathology diagnostic challenge : case #28

Signalment: 11 year old mare Quarterhorse.

History: foul-smelling, muoid, liquid diarrhea that appeared the day after abdominal surgery (partial bowel resection).

Physical exam observations: weakness, anorexia, hyperthermia.

CBC results		Clinical chemistry results	
Hematocrit (0.32-0.52 L/L)	0.38	Glucose (3.4-6.2 mmol/L)	7.0
Hemoglobin (111-190 g/L)	139	BUN (4.1-7.6 mmol/L)	7.5
Erythrocytes (6.5-12.5 x 10 ¹² /L)	8.31	Creatinine (87-150 µmol/L)	145
MCV (34-58 fL)	50.1	Bilirubin (15-48 µmol/L)	45
MCHC (310-370 g/L)	334	GGT (9-30 U/L)	30
Platelets (100-600 x 10 ⁹ /L)	65	Alkaline phosphatase (67-185 U/L)	180
Plasma protein (55-70 g/L)	49	AST (182-384 U/L)	400
Fibrinogen (< 4 g/L)	7	CK (80-444 U/L)	890
Leukocytes (5.5-12.5 x 10 ⁹ /L)	4.41	Total protein (53-71 g/L)	48.0
Neutrophils (mature) (2.7-6.7 x 10 ⁹ /L)	1.06	Albumin (31-39 g/L)	28.0
Neutrophils (band) (0-0.1 x 10 ⁹ /L)	1.15	Globulins (20-35 g/L)	20.0
Lymphocytes (1.5-7.5 x 10 ⁹ /L)	1.06	Calcium (2.89-3.30 mmol/L)	3.0
Monocytes (<0.8 x 10 ⁹ /L)	0.13	Phosphorus (0.77-1.67 mmol/L)	1.50
Eosinophils (<0.9 x 10 ⁹ /L)	0	Potassium (3.36-4.99 mmol/L)	3.3
Basophils (0 - rare x 10 ⁹ /L)	0	Sodium (135-143 mmol/L)	125
		Chloride (95-105 mmol/L)	90
		Total CO ₂ (27-34 mmol/L)	21
		Anion Gap (4-13 mmol/L)	20

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