

## Clinical pathology diagnostic challenge : case #14

**Signalment:** 18 year old, male Thoroughbred.

**History:** teeth filed a week ago, partial anorexia, difficulty drinking, abdominal discomfort.

### Physical exam observations:

Left supraorbital tumefaction

Temperature: 38.4 C

Pulse: 64 beats / minute

Respiration: 24 / minute

TRC: 2 seconds

Rectal palpation: important distension of ceacum; gastric reflux: 10 L foul-smelling fluid.

### CBC results

|  |      |
|--|------|
| Hematocrit (0.32-0.52 L/L)                       | 0.56 |
| Hemoglobin (111-190 g/L)                         | 198  |
| Erythrocytes ( $6.5-12.5 \times 10^{12}$ /L)     | 11.5 |
| MCV (34-58 fL)                                   | 50.7 |
| MCHC (310-370 g/L)                               | 341  |
| Platelets ( $100-600 \times 10^9$ /L)            | 167  |
| Plasma protein(55-70 g/L)                        | 85   |
| Fibrinogen (< 4 g/L)                             | 3    |
| Leukocytes ( $5.5-12.5 \times 10^9$ /L)          | 11.4 |
| Neutrophils (mature) ( $2.7-6.7 \times 10^9$ /L) | 10.4 |
| Neutrophils (band) ( $0-0.1 \times 10^9$ /L)     | -    |
| Lymphocytes ( $1.5-7.5 \times 10^9$ /L)          | 0.7  |
| Monocytes (< $0.8 \times 10^9$ /L)               | 0.3  |
| Eosinophils (< $0.9 \times 10^9$ /L)             | 0    |
| Basophils (0 - rare $\times 10^9$ /L)            | 0    |

### Clinical chemistry results

|  |       |
|--|-------|
| Glucose (3.4-6.2 mmol/L)               | 6.4   |
| BUN (4.1-7.6 mmol/L)                   | 22    |
| Creatinine (87-150 $\mu$ mol/L)        | 319   |
| Bilirubin (15-48 $\mu$ mol/L)          | 150   |
| Direct bilirubin (1.2-4.3 $\mu$ mol/L) | 25    |
| GGT (9-30 U/L)                         | 73    |
| Alkaline phosphatase (67-185 U/L)      | 224   |
| AST (182-384 U/L)                      | 661   |
| CK (80-444 U/L)                        | 393   |
| Total protein (53-71 g/L)              | 85.8  |
| Albumin (31-39 g/L)                    | 41.6  |
| Globulins (20-35 g/L)                  | 44.2  |
| Calcium (2.89-3.30 mmol/L)             | 3.46  |
| Phosphorus (0.77-1.67 mmol/L)          | 1.28  |
| Potassium (3.36-4.99 mmol/L)           | 3.06  |
| Sodium (135-143 mmol/L)                | 133   |
| Chloride (95-105 mmol/L)               | 93    |
| Total CO <sub>2</sub> (27-34 mmol/L)   | 23.2  |
| Anion gap (4-13 mmol/L)                | 20.06 |

### Coagulation times

OSPT: 10.0 seconds

APTT: 42.3 seconds

### Cytology (Abdominal tap)

Appearance Yellow, mildly turbid

Proteins 21 g / L

Leukocytes  $0.82 \times 10^9$  / L

Reference values: APTT: 31-93 sec, OSPT: 9.2-10.5 sec.

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