SUCCESSFUL MANAGEMENT OF AN OUTBREAK OF TYZZER’S DISEASE; CLOSTRIDIUM PILIFORME NECROTISING HEPATITIS

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Study aims:
1. To describe the clinical and clinicopathological findings in two non-surviving foals with confirmed Clostridium Piliforme necrotising hepatitis, and two surviving foals
2. To describe the use of Sorbitol dehydrogenase (SDH) as a screening tool to identify subclinical/early cases, for prophylactic antimicrobial treatment.

3. To identify Clostridium Piliforme carrier status by faecal PCR testing.

<table>
<thead>
<tr>
<th>Case</th>
<th>Age (days)</th>
<th>Symptoms</th>
<th>Prevaling clinical signs</th>
<th>Treatment</th>
<th>Blood culture</th>
<th>Concurrent pathology</th>
<th>Survival</th>
<th>Diagnostic method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Filly</td>
<td>20</td>
<td>Lethargy, anorexia, infused to jaundice oral mucous membranes, depression, recumbency</td>
<td>Initial severe hypoelycaemia (neuropathia) with left shift, increased AST, LDH, total bilirubin, ammonia.</td>
<td>Penicillin, Amikacin, Metronidazole, Fluid therapy with glucose, Vitamin C and Thiamine, Lactulose.</td>
<td>Refractory glucose dysregulation</td>
<td>Sepsis, Acute hepatitis with cholestasis, Metabolic acidosis, Hyperammonaemia</td>
<td>E Coli cultured post-mortem from lung and liver tissue – sensitive to Amikacin</td>
<td>Euthanised due to poor prognosis</td>
</tr>
<tr>
<td>Colt</td>
<td>25</td>
<td>Acute onset weakness, recumbency, depression, infused to jaundice oral mucous membranes</td>
<td>Leucopaenia and thrombocytopenia with left shift, increased AST, LDH, total bilirubin, ammonia (mild).</td>
<td>Penicillin, Amikacin, Metronidazole, Fluid therapy with glucose, Vitamin E, Pentoxifylline, JS plasma.</td>
<td>Sepsis, SIRS, Acute hepatitis, Glucose dysregulation, Hyperammonaemia</td>
<td>No growth</td>
<td>Sigmoidal faecal culture positive</td>
<td>Survived, discharged after 5 days</td>
</tr>
<tr>
<td>Colt</td>
<td>22</td>
<td>Acute onset weakness, recumbency, coma, infused to jaundice oral mucous membranes</td>
<td>Elevated SDH x 11</td>
<td>Leucopaenia and lymphopenia with left shift, increased AST, LDH, total bilirubin, triglycerides.</td>
<td>Sepsis, SIRS, Acute hepatitis, Glucose dysregulation, Hyperammonaemia</td>
<td>No growth</td>
<td>None identified</td>
<td>Survived, discharged after 6 days</td>
</tr>
<tr>
<td>Colt</td>
<td>19</td>
<td>Lethargy, anorexia, weakness, recumbency to stupor, infused to jaundice oral mucous membranes</td>
<td>Leucopaenia (neuropathia)</td>
<td>Increased AST, LDH, total bilirubin, Hyperfibrinogenemia.</td>
<td>Sepsis, SIRS, Acute hepatitis, Glucose dysregulation, Metabolic acidosis, Hyperammonaemia</td>
<td>No growth</td>
<td>Mf. Influenzae infection</td>
<td>Euthanised due to poor prognosis</td>
</tr>
</tbody>
</table>

SDH values in critically presenting foals: days 0 - 2 of hospitalisation

SDH values of outbreak farm co-resident foals

SDH IUL

Outbreak farm

Test individual | PCR result | Control farm Case control matched by foaling date | PCR result
--- | --- | --- | ---
Dam of critical case 1 | - | Control dam 1 | -
Dam of critical case 2 | - | Control dam 2 | -
Critical case 2 | - | - | -
Dam of critical case 3 | - | Control dam 3 | -
Critical case 3 | - | - | -
Dam of critical case 4 | - | Control dam 4 | -
Dams of foals with SDH > 20 IU/L (N=6) | Control dams (N=6) | (N=4) Failed quality control (N=2) |