

Management of a clostridial diarrhoea outbreak in neonatal foals on a Thoroughbred stud farm in New Zealand

Lucy Russell¹, Emma Gordon²
¹Equivets NZ; ²Massey University

Introduction

In the 2019 breeding season, an outbreak of neonatal diarrhoea in 1–4 day old foals was observed on a Thoroughbred stud farm in the lower North Island. This was primarily attributed to *Clostridium perfringens* Type C, with some affected foals also returning positive results for *Clostridium difficile*. The author was engaged to aid in immediate management during the outbreak and to put plans in place for future seasons. The first case was recorded on 7 October, and the last on 25 October.

Methods

Diagnosis and treatment of clinical cases are discussed.

Short term on-farm protocols included isolation, decontamination and hygiene measures, the foaling unit was moved and the remaining foals to be born were treated with oral metronidazole at 10 mg/kg PO BID (per os, twice daily) for three days.

Long term on-farm protocols included management changes, moving the foaling unit, hygiene, and isolation measures, failure of passive transfer (FPT) and colostrum management improvement and *Sacchromyces boulardii* administration.

Results

During the 2019 season outbreak morbidity of foals contracting *C. perfringens* was 15/176 foals and mortality was 7/176 foals born. Two foals with a positive PCR for Clostridia which died or were subject to euthanasia were attributed another cause of death; neonatal isoerythrolysis and severe gastric ulceration and pyloric stenosis respectively.

Following implementation of short-term changes, the mortality and morbidity rates associated with Clostridial diarrhoea were zero of the remaining 45 foals born. During the 2020 season, the morbidity rate was 2/146 neonatal foals with diarrhoea returning a positive *C. perfringens* PCR and mortality 0/146 foals born.

Conclusions

Treatment of the foals affected with *C. perfringens* diarrhoea in 2019 yielded variable results, with a mortality rate of 5/15 of all positive cases, directly attributed to *C. perfringens*. The cost of this was significant. Anecdotally, affected foals appeared more likely to develop other problems such as umbilical abscessation and pneumonia.

The changes put in place in 2019 resulted in immediate cessation of development of new cases. The changes put in place for the 2020 foaling season resulted in a marked reduction in morbidity rate and mortality.

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Gordon E

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