

Mannheimiosis in a Rusa deer (*Rusa timorensis*): a case report and a herd analysis

ABSTRACT

Mannheimiosis and pasteurellosis is an important respiratory tract disease in cattle, sheep, goats and other ruminants. This article describes the first case of pneumonic and septicaemic mannheimiosis and pasteurellosis in a herd of *Rusa timorensis* and *Dama dama* deer. A *Rusa timorensis* stag showed constant reduction in body weight and was found dead on the 30th May 2016. Severe pulmonary hepatisation and multiple pulmonary abscessation along with emaciation and evidences of traumatic injuries were observed at post-mortem. Diagnosis of pneumonic and septicaemic mannheimiosis with concurrent colisepticaemia was made based on the bacterial culture. A retrospective study on deer from the same herd revealed occurrence of respiratory infection leading to death. Review of other cases from the animal from the same herd revealed that respiratory infections is a problem within this particular herd with transportation, bullying, poor nutrition and inclement weather being some of the important stress factors leading to respiratory infection. *Pasteurella multocida* and *Mannheimia haemolytica* were the two main important organisms in these cases, along with concurrent infection by *Escherichia coli* and *Burkholderia pseudomallei*. Other stress factors such as occurrence of El Niño and natural behaviour such as rutting in deer leading to manifestation of the disease in the herd were highlighted. Potential approaches to manage stress with the interest of rutting season were also discussed. This report is the first reported case of septicaemic mannheimiosis in a deer.

Keyword: Colisepticaemia; Deer; Mannheimiosis; Pasteurellosis; *Rusa timorensis*