CLINICAL RESPONSE AND PATHOLOGICAL CHANGES ASSOCIATED WITH Pasteurella multocida TYPE B INFECTION THROUGH ORAL ROUTE INOCULATION IN MICE

Syahirah Ahmad Affandi, 1,3 Faez Firdaus Jesse Abdullah, 1 Abdul Aziz Saharee & 2 Jasni Sabri
1 Department of Veterinary Clinical Studies
2 Department of Veterinary Pathology & Microbiology
3 Ruminant Diseases Research Centre
Faculty of Veterinary Medicine
Universiti Putra Malaysia, 43400 UPM Serdang, Selangor, Malaysia

Abstract

Haemorrhagic septicaemia (HS) is caused by Pasteurella multocida type B in Asia (P. multocida type B). It is an important cattle and buffalo disease in Malaysia as well as other Southeast Asian countries due to its nature of acute and highly fatal disease which have an economic impact on the affected countries. This study describes the clinical signs and histopathological changes in mice following oral route inoculation with P. multocida type B. In this study, sixteen mice were selected and divided into two groups of 8 mice each. Mice in group 2 were inoculated with 1.0 mL 10⁹CFU/mL P. multocida type B orally while group 1 with PBS orally. The entire challenged group showed significant clinical signs (P<0.05) where ruffled fur, laboured breathing, less responsive and dullness together with eye discharge were observed. Six out of 8 mice died between 24 to 50 hours post-inoculation. Histopathological lesions observed include haemorrhage, congestion, degeneration and necrosis and infiltration by the inflammatory cells in the lungs, kidney, heart, liver and small intestine. The study showed that experimental P. multocida infection in mice caused oedema the lungs and infiltration of numerous Kupffer cells in the liver.

Keywords: Pasteurella multocida type B, oral inoculation, histopathology, clinical signs, mice