

**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,

¹Abdul Aziz Saharee & ²Jasni Sabri

¹Department of Veterinary Clinical Studies

²Department of Veterinary Pathology & Microbiology

³Ruminant 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