Detection of *Leptospira sp.* in experimentally infected guinea pigs

Abd Hamid MS, Engcong DM, Zakaria Z, Ramli SN, Roslee R

Veterinary Research Institute, No 59, Jalan Sultan Azlan Shah, Ipoh, Perak

ABSTRACT

Introduction: Leptospirosis is a contagious disease affecting animals and humans, caused by infection with pathogenic members of the genus Leptospira. Laboratory diagnosis of leptospirosis can be complex and involves tests that fall into two groups. One group of tests is designed to detect anti-leptospiral antibodies, while the other group is intended to identify leptospires, leptospiral antigens or leptospiral nucleic acid in animal tissues or body fluids. **Objective:** This study aimed to detect *Leptospira sp.* using polymerase chain reaction (PCR) in experimentally infected guinea pigs. **Materials and Method:** Guinea pigs were divided into two groups: Group 1 was inoculated with unspecified *Leptospira*, while Group 2 was inoculated with *Leptospira interrogans*. Both groups were observed for 21 days. Sawdust samples were collected every two days post-inoculation starting from day 3. On day 15, all guinea pigs were culled and organ samples were collected. All samples were subjected to PCR. **Results:** Sawdust samples from day 3 and day 10 post-inoculation from Group 1 tested positive, whereas sawdust samples from Group 2 tested negative. The PCR results for internal organs from both groups (Group 1 and 2) were also negative. **Conclusion:** This study provides insight into the pathogenicity of unspecified *Leptospira sp.* (field isolates) isolated from diagnostic samples in guinea pigs.