

Experimental Infection of Hamsters with a Local Leptospiral Isolate from Rats

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Abstract

This study was conducted to investigate the clinical signs and post mortem lesions of the experimentally infected hamsters with leptospiral isolate. It also examined the stage of leptospiremia and the antibody titres in the infected hamster. A leptospiral isolate obtained from a rat was used as the infective inoculum. Twenty hamsters were infected with the leptospiral isolate and another 5 hamsters were used as negative controls. The concentration of the inoculum was 1×10^8 leptospire/mL. Blood was taken and post mortem lesions were observed from two infected hamsters and one negative control hamster every alternate day. The blood samples obtained were tested for leptospiral antibodies by MAT and PCR for leptospiral DNA. Clinical signs were observed everyday for any changes in the infected hamster. The hamsters were hypothermic on day three onwards and they were weak, depressed and anorexic on day 12 onwards. Infected hamsters had petechial hemorrhages in the lungs on day 5 and “butterfly” hemorrhages on day 8 onwards in the lungs. There was little petechial hemorrhages on the margin of the liver on day 12 onwards. For MAT and PCR, the results were all negative.

Keywords: hamster, leptospira, clinical signs, post mortem lesions, MAT