

Seroprevalence of *Helicobacter hepaticus* in Mice from Laboratory Animal Facilities in Klang Valley, Malaysia

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Abstract

Helicobacter is a genus of Gram-negative bacteria possessing a characteristic helix shape. They were initially considered to be members of the *Campylobacter* genus, but since 1989 they have been grouped in their own genus. *Helicobacter hepaticus* is an enterohepatic *Helicobacter* species (EHS) belonging to the family *Helicobacteriaceae* of the order *Campylobacterales* of Epsilon-proteobacteria division. It is a Gram-negative, microaerophilic, urease-positive, spiral rod. *H. hepaticus* colonises the colon and invades the liver of mice causing chronic severe active hepatitis and proliferative typhlocolitis. It can also induce hepatocellular carcinomas in certain breeds. The bacterium has been associated with inflammatory bowel disease in immunocompromised mice. Certain strains of mice will develop a proliferative, inflammatory typhlitis and/or colitis that may result in rectal prolapse. Detection of *H. hepaticus* in laboratory mice is therefore important because of its effect on research animals ultimately complicating the research findings. Currently PCR, culture, serology test or histologic examination of silver-stained liver sections is used to diagnose *H. hepaticus* infection. Most mice colonised with helicobacters remain asymptomatic for long periods of time. This study was conducted to investigate the serological prevalence of *Helicobacter hepaticus* in mice in 5 laboratory facilities in the Klang Valley. Fifty sera were collected and examined for presence of *H. hepaticus* antibodies by commercial ELISA test kit. Result showed two facilities had positive sera towards *H. hepaticus* while the rest were negative. Four of fifty sera were positive while other serum samples were negative.

Keywords: *Helicobacter hepaticus*, enterohepatic, typhlocolitis