

HEALTH MANAGEMENT OF MACAQUE OUTDOOR COLONIES WITH FOCUS ON HEPATITIS E INFECTION

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One of the important things for macaques to keep healthy is how to control infectious diseases, especially zoonoses. Recently Hepatitis E virus (HEV) infection was revealed among macaque colonies kept in outdoor enclosures at the Primate Research Institute, Kyoto University. We will discuss the way to control zoonoses for macaque outdoor colonies with focus on this infection. An acute hepatitis caused by HEV is found among many developing countries in Asia, the Middle East and North Africa in humans. Serum antibodies to HEV were detected in many kinds of animals including pigs, deers, wild boars, wild rats, dogs, cats, cows, and monkeys as well. Among these seropositive animal species, HEVs genetically similar to human HEVs have been isolated from pigs, deers and wild boars. A total of 100 macaques belonging to nine colonies kept in outdoor enclosures were serologically examined for the HEV infection from 2004 to 2008 as a part of annual health inspections. Antibodies to HEV were not detected among the macaques in 2004. Whereas, in 2005 seropositive individuals were found in the two colonies. Furthermore, anti-HEV seropositive individuals were identified in 7 out of 9 colonies in 2006. Molecular analyses identified the presence of HEV genome in the plasma of a seropositive Japanese macaque by RT-PCR and direct sequencing. Reservoirs and transmission routes of HEV from outside are still unclear. However, care staffs and/or researchers could have carried HEV among those colonies until we took measures against HEV.

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