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Coprological Diagnosis of Gastrointestinal Parasites in Captive Primates in Peninsular Malaysia

Tan Wan Chin, Ho Gim Chong & ¹Reuben Sharma
Department of Veterinary Pathology and Microbiology
Faculty of Veterinary Medicine, Universiti Putra Malaysia

Abstract

The present study was undertaken to determine the prevalence of gastrointestinal parasites in captive primate populations in three Zoos in Peninsular Malaysia. A total of 52 faecal samples were collected from the enclosures of five species of local primates comprising Orang Utans (*Pongo pygmaeus*), White-Handed Gibbons (*Hylobates lar*), Siamangs (*Symphalangus syndactylus*), Stump-tail Macaques (*Macaca arctoides*) and Slow Loris (*Nycticebus coucang*). The samples were subjected to Formal-Ether sedimentation, Ziehl-Neelsen and Giemsa staining for microscopy detection of helminth ova and protozoan cysts. PCR with species-specific primers were used to detect *Cryptosporidium*. A total of 46 (88%) faecal samples were positive for various parasites by microscopy. The most common parasite harboured by the captive primates was *Entamoeba* (65.4%), followed by Strongyles (40.4%), *Strongyloides* (15.4%) and *Cryptosporidium* (9.6%). *Balantidium* and *Trichuris* showed relatively low infection rates (1.9%). PCR assay had a higher sensitivity (15.4%) for the detection of *Cryptosporidium* compared to conventional microscopy and Ziehl-Neelsen staining (9.6%). The high rate of infection with *Entamoeba* and *Cryptosporidium*, and the presence of *Balantidium* in the captive primates are of concern as they pose a potential zoonotic risk to animal handlers, keepers and the public.

Keywords: Gastrointestinal parasites, primates, PCR