

COPRO-DNA DIAGNOSIS OF *OPISTHORCHIS VIVERRINI* AND *HAPLORCHIS TAICHUI* INFECTION IN AN ENDEMIC AREA OF LAO PDR

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Abstract. The utility of differential copro-DNA diagnosis using modified sample preparation steps of small liver and minute intestinal fluke infections was tested. Fecal samples containing parasite eggs were washed extensively with diluted detergent solution. Parasite eggs were concentrated by sedimentation and broken by microwaving before DNA extraction. PCR targeting ITS1 and ITS2 regions were performed using primer specific for *Opisthorchis viverrini*, *Haplorchis taichui* and other related species. Of 125 fecal samples, 94 were positive for small trematode eggs by a modified cellophane thick smear method. By ITS1-PCR, 52 samples were positive for *O. viverrini*, 12 *H. taichui* and 7 mixed infection. By ITS2-PCR, 63 were positive for *O. viverrini*, 17 *H. taichui*, and 19 mixed infection. The ITS-PCR assay identified a higher number of opisthorchiasis cases than those with *O. viverrini* expelled after treatment, but for *H. taichui*, ITS-PCR identified less than half of the worm expelled cases. These results showed that copro-DNA diagnosis was useful for the differential diagnosis of *O. viverrini* and *H. taichui* infection, which could not be discriminated by microscopy.

Key words: copro-DNA diagnosis, *Opisthorchis viverrini*, *Haplorchis taichui*, Lao PDR

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