

AN ENZYME-LINKED IMMUNOSORBENT ASSAY AS SCREENING TOOL FOR HUMAN INTESTINAL CAPILLARIASIS

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Abstract. Human intestinal capillariasis caused by *Capillaria philippinensis* is characterized by chronic diarrhea which may lead to death if left untreated. The mortality is highest among patients who are negative by conventional stool examination. Therefore this study explored the application of an enzyme-linked immunosorbent assay (ELISA) as a screening test for human intestinal capillariasis. The ELISA was developed using *Trichinella spiralis* soluble antigen for the detection of antibodies against *C. philippinensis*. A cut-off level at the upper 99% limit of the absorbance values of the healthy controls was established for positivity. All intestinal capillariasis sera showed positive ELISA, demonstrating 100% sensitivity, while all healthy control sera gave absorbance values below the cut-off level, resulting in 100% specificity. The ELISA was also positive with 75% of trichinellosis, 13.9% of strongyloidiasis, 9.1% of trichuriasis, and 4.2% of opisthorchiasis sera. The ELISA and immunoblot were in agreement in 91.1% of the sera tested. It was suggested that the here-presented ELISA is capable to detect intestinal capillariasis cases in endemic areas whose coproscopy is negative for worm eggs, larvae or adults.

Key words: ELISA, *Capillaria philippinensis*, screening test

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