

Publication

Accuracy of the Kato-Katz method and formalin-ether concentration technique for the diagnosis of *Clonorchis sinensis*, and implication for assessing drug efficacy**JournalArticle (Originalarbeit in einer wissenschaftlichen Zeitschrift)**

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Background: Clonorchiasis is a chronic neglected disease caused by a liver fluke, *Clonorchis sinensis*. Chemotherapy is the mainstay of control and treatment efficacy is usually determined by microscopic examination of fecal samples. We assessed the diagnostic accuracy of the Kato-Katz method and the formalin-ether concentration technique (FECT) for *C. sinensis* diagnosis, and studied the effect of diagnostic approach on drug efficacy evaluation. Methods: Overall, 74 individuals aged ≥ 18 years with a parasitological confirmed *C. sinensis* infection at baseline were re-examined 3 weeks after treatment. Before and after treatment, two stool samples were obtained from each participant and each sample was subjected to triplicate Kato-Katz thick smears and a single FECT examination. Results: Thirty-eight individuals were still positive for *C. sinensis* according to our diagnostic 'gold' standard (six Kato-Katz thick smears plus two FECT). Two FECT had a significantly lower sensitivity than six Kato-Katz thick smears (44.7% versus 92.1%; $p < 0.001$). Examination of single Kato-Katz and single FECT considerably overestimated cure rates. Conclusions: In settings where molecular diagnostic assays are absent, multiple Kato-Katz thick smears should be examined for an accurate diagnosis of *C. sinensis* infection and for assessing drug efficacy against this liver fluke infection.

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