

# Publication

A single FLOTAC is more sensitive than triplicate Kato-Katz for the diagnosis of low-intensity soil-transmitted helminth infections

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Accurate diagnostic tools are pivotal for patient management and surveillance of helminth control programmes, particularly in the current era of preventive chemotherapy. Three consecutive stool samples were obtained from 279 schoolchildren from Zanzibar, an island where anthelminthic drugs have been administered on a large scale for more than a decade. All stool samples were examined with the Kato-Katz method. Additionally, one sample per child was preserved in sodium acetate-acetic acid-formalin solution, and examined with the FLOTAC technique. Considering the pooled results of both methods as diagnostic 'gold' standard, the observed prevalences of Trichuris trichiura, hookworm and Ascaris lumbricoides were 63.4, 35.8 and 22.9%, respectively. The sensitivity of examining a single stool sample by FLOTAC for diagnosing T. trichiura, hookworm and A. lumbricoides was 88.7, 83.0 and 82.8%, respectively. Lower sensitivities were observed for Kato-Katz even after examining three stool samples: 71.8, 46.0 and 70.3%, respectively. Kato-Katz revealed considerably higher infection intensities than FLOTAC. The kappa agreement between a single FLOTAC and triplicate Kato-Katz was 0.63 for diagnosing A. lumbricoides and 0.50 for T. trichiura, but only 0.30 for hookworm. The high sensitivity of FLOTAC holds promise for patient management, monitoring soil-transmitted helminth transmission and endpoint(s) of control at the population level

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