

Publication

Albendazole and mebendazole administered alone or in combination with Ivermectin against *Trichuris trichiura*: a randomized controlled trial

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Background. Single-dose albendazole and mebendazole show limited efficacy in the treatment of trichuriasis. The combination of albendazole with ivermectin improves efficacy, but a mebendazole-ivermectin combination has not been previously investigated. Methods. We performed a randomized controlled trial in 2 schools in Zanzibar, Tanzania, to assess the efficacy and safety of albendazole (400 mg) plus placebo, albendazole plus ivermectin (200 µg/kg), mebendazole (500 mg) plus placebo, and mebendazole plus ivermectin in children with a parasitologically confirmed *Trichuris trichiura* infection. Cure rate (CR) and egg reduction rate were assessed by intent-to-treat analysis. Adverse events were monitored within 48 h after treatment. Results. Complete data records were available for 548 children. The highest CR against *T. trichiura* was achieved with a mebendazole-ivermectin combination (55%). Low CRs were observed with albendazole-ivermectin (38%), mebendazole (19%), and albendazole (10%). Compared with placebo, the use of ivermectin statistically significantly increased the CRs from 14% to 47% (odds ratio, 0.19; 95% confidence interval [CI], 0.12-0.28). The highest egg reduction rate (97%; 95% CI, 95%-98%) was observed using the mebendazole-ivermectin combination, followed by albendazole-ivermectin (91%; 95% CI, 87%-94%), mebendazole (67%; 95% CI, 52%-77%), and albendazole (40%; 95% CI, 22%-56%). The adverse events, reported by 136 children, were generally mild, with no significant difference between the treatment arms. Conclusions. Addition of ivermectin improves the therapeutic outcomes of both albendazole and mebendazole against *T. trichiura* and may be considered for use in soil-transmitted helminth control programs and individual patient management. Trial registration. isrctn.org Identifier: ISRCTN08336605

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