Background The lymphatic filariasis (LF) control programme has been on-going in Ghana since 2000 with mass drug administration (MDA) of ivermectin (IVM) and albendazole (ALB). Soil-transmitted helminth (STH) infections control is augmented within this programme. Therefore this study aimed to determine the efficacy of ALB against STH infections and impact of MDA on study participants.

Methods This was a twelve months longitudinal study. A total of 412 subjects including school children (between the ages of 2–17 years) and pregnant women were randomly selected from four endemic communities in Kpandai district of the Northern region. Coprological assessment for parasites was based on the Kato–Katz technique in both dry and rainy seasons at baseline, 21 days and 3 months post treatment. Single dose albendazole treatment was administered to all patients at baseline.

Results Of all the parasites found (hookworm, *Trichuris trichuria*, *Hymenolepis nana*, and *Taenia sp.*), hookworm was the most prevalent. In the dry season, the overall STHs prevalence at pre-treatment was 29%, while 9% and 13% prevalence was recorded at 21 days, and three months after treatment, respectively. However, in the rainy season, the overall STHs prevalence was 8%, while 4% and 12% was recorded at 21 days and three months respectively after ALB treatment. In general, ALB treatment resulted in an overall hookworm egg count reduction rate of 89% in the dry season and 93% in the rainy season, while the *T. trichiura* egg count reduction rate was 100% in both seasons.

Conclusions STH infections still remain a significant public health burden in Ghana. Hookworm infection seems to respond poorly or suboptimally to ALB, raising concerns of possible emergence of resistance which may lead to a major setback for the control and elimination of STH infections, especially hookworm infections.