

Tribendimidine shows promise against intestinal worms

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Researchers have reported positive results from a safety and efficacy study pertaining to tribendimidine, a broad-based treatment for intestinal worm infections. The group's results demonstrate the success of the new drug from China versus that of the standard albendazole for the treatment of hookworm, large roundworm, whipworm, and, for the first time, threadworm and tapeworm.

The study was jointly implemented by researchers from the Swiss Tropical Institute in Basel, the National Institute of Parasitic Diseases (IPD) in Shanghai, the Yunnan Institute of Parasitic Diseases in Simao, China, and the Jiangsu Institute of Parasitic Diseases in Wuxi, China. Details are published October 15th in the open-access journal *PLoS Neglected Tropical Diseases*.

Globally, more than one billion people are infected with intestinal worms. These chronic infections negatively impact on child and maternal health, nutritional status, physical performance, and cognitive development. The current control strategy relies on drugs to reduce morbidity, ideally complemented by the provision of safe water and sanitation to curb transmission. Only four drugs are currently recommended by the World Health Organization for treating soil-transmitted helminth infections, making the potential development of drug resistance a concern. Tribendimidine belongs to a different chemical class than current worm treatments. The drug had been developed at IPD and Shandong Xinhua Pharmaceutical in Zibo, China, and was approved by the China State Food and Drug Administration in

2004.

The community-based study involved 123 individuals who were screened for intestinal helminth infections, and randomly allocated to tribendimidine or the widely used albendazole treatment (both at 200 mg for children aged 5-14 years and 400 mg for individuals aged 15 years and above). The researchers' administration of a single oral dose of tribendimidine cured up to 92% of the common soil-transmitted helminth infections in humans in a highly endemic setting in China. Encouraging results were also found against threadworm and tapeworm infections. After treatment, these two parasites were absent in 55% and 67% of those initially infected, respectively. The infection intensity of large roundworms and hookworms was significantly reduced by both drugs, and no adverse treatment-related events were noted among the final study cohort.

The obtained results need to be validated in larger patient cohorts and different epidemiological settings, and repeated dosing should be tested to further improve treatment outcomes.

Citation: Steinmann P, Zhou X-N, Du Z-W, Jiang J-Y, Xiao S-H, et al. (2008) Tribendimidine and Albendazole for Treating Soil-Transmitted Helminths, *Strongyloides stercoralis* and *Taenia* spp.: Open-Label Randomized Trial. PLoS Negl Trop Dis 2(10): e322.
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