

OBJECTIVE:

To investigate trends in the efficacy of praziquantel (PZQ) suggestive of the emergence of drug resistance against *Schistosoma mansoni* infection after 12.5 years of intense, repeated use in a small geographic area along the shores of Lake Victoria.

METHODS:

As part of a longitudinal study, 178 men occupationally exposed to schistosomes were repeatedly tested for *S. mansoni* infection at 4- to 6-week intervals and treated with PZQ at each reinfection. We compared cure rates by year of study and examined factors associated with cure failure in a multivariate logistic regression model.

RESULTS:

Overall, the cure rate after a single dose of PZQ was 66%, ranging annually from 36% to 82%. In multivariate analysis, failure to cure after 1 PZQ dose was significantly associated with high intensity of infection and having fewer previous exposures to dying worms. Even after adjustment for these factors, treatments administered in 2006 were significantly more likely to result in cure failures than treatments administered in 2004, the year in which PZQ efficacy was highest. While cure rates varied over the course of 12 years, there was no consistent downward trend towards decreased efficacy over time. In years for which malacological data were available, periods of low PZQ efficacy coincide with high rates of *S. mansoni* infection in nearby snail populations.

CONCLUSION:

We did not find a pattern of cure failures consistent with development of clinical resistance to PZQ in our intensely treated cohort.