Two hundred children infected with Schistosoma mansoni were treated with either 20 mg/kg oxamniquine or 60 mg/kg praziquantel. Cure rates (about 85%) were similar as was the percentage reduction (80%) in egg counts in uncured children. Treatment with the alternative drug of children not cured with the first treatment resulted in negative stools in 11 of 12 cases examined one month after the second round of therapy. In order to minimize the risk of the development of drug resistance, our data suggest that infected patients be treated with one drug, and therapeutic failures with another. Evidence from experiments in mice with isolates obtained after failures of one treatment in children suggests that therapeutic failure does not necessarily indicate the presence of drug-resistant schistosomes. The value of using mice to assess drug resistance in schistosomes is questioned.