

# Epidemiology and control of schistosomiasis in preschool-aged children in Côte d'Ivoire, with particular consideration to the efficacy and safety of crushed praziquantel tablets

<b>Submission date</b> 23/08/2011	<b>Recruitment status</b> No longer recruiting	<input type="checkbox"/> Prospectively registered
<b>Registration date</b> 07/11/2011	<b>Overall study status</b> Completed	<input type="checkbox"/> Protocol
<b>Last Edited</b> 05/09/2014	<b>Condition category</b> Infections and Infestations	<input type="checkbox"/> Statistical analysis plan
		<input checked="" type="checkbox"/> Results
		<input type="checkbox"/> Individual participant data

## Plain English summary of protocol

### Background and study aims

Schistosomiasis is a disease caused by parasitic worms and remains a major public health problem in Africa. The current global strategy to control schistosomiasis is to use the drug praziquantel. School-aged children (age: 6-15 years) are at highest risk of schistosomiasis, and hence praziquantel is mainly administered to this age group. However, recent studies have shown that in areas where schistosomiasis is highly prevalent, preschool-aged children (<6 years) might already be at risk of schistosomiasis, and hence should be included in regular treatments. The main aim of this study is to find out about the epidemiology (the incidence, distribution, and possible control) of schistosomiasis in preschool-aged children in two selected villages in Azaguié district, south Côte d'Ivoire, where schistosomiasis is highly prevalent. Children will then be treated with praziquantel, using crushed tablets. The safety and effectiveness of the treatment will be determined. Findings from our study will contribute to a better understanding of the local epidemiology of schistosomiasis in the Azaguié district and will determine whether crushed tablets are safe and effective against schistosomiasis in preschool-aged children.

### Who can participate?

All children below the age of 6 years in two selected villages in Azaguié district. Parents or legal guardians of eligible children will be asked to sign an informed consent sheet.

### What does the study involve?

Children will be invited to provide two stool and two urine samples for schistosomiasis diagnosis. Additionally, a single fingerprick blood sample will be taken. Finally, children will be examined by a study physician and only those deemed healthy will be enrolled for treatment with a single oral dose of praziquantel, using crushed tablets. Adverse events will be monitored within 4 hours after treatment and children will be interviewed about adverse events again 24 hours post-treatment. 3-4 weeks post-treatment, children will be re-examined using the same diagnostic approach as at baseline.

What are the possible benefits and risks of participating?

Praziquantel has been widely used over the past 30 years. It might cause some adverse events (e.g. abdominal pain, diarrhoea, vomiting), but these are usually mild and self-limiting. Treatment will be given under medical supervision. At the end of the study, the entire village population will be given praziquantel and albendazole (against soil-transmitted helminthiasis) free of charge.

Where is the study run from?

The study will be carried out in two villages in the Azaguié district, located in south Côte d'Ivoire.

When is the study starting and how long is it expected to run for?

The study will start in August 2011 and will run for about 6-8 weeks.

Who is funding the study?

The study is funded by the Rudolf Geigy-Stiftung zu Gunsten des Schweizerischen Tropen- und Public Health-Instituts, based in Basel, Switzerland.

Who is the main contact?

Prof. Dr. Jürg Utzinger  
juerg.utzinger@unibas.ch

## Contact information

### Type(s)

Scientific

### Contact name

Prof Juerg Utzinger

### Contact details

Department of Epidemiology and Public Health  
Swiss Tropical and Public Health Institute  
Socinstrasse 57  
Basel  
Switzerland  
4002

## Additional identifiers

### Protocol serial number

N/A

## Study information

### Scientific Title

Epidemiology and control of schistosomiasis in preschool-aged children in Côte d'Ivoire, with particular consideration to the efficacy and safety of crushed praziquantel tablets: a non-randomised study

### Study objectives

1. Praziquantel (administered at 40 mg/kg oral dose using crushed tablets) is efficacious against *S. mansoni* and *S. haematobium* infections in preschool-aged children
2. Praziquantel treatment in preschool-aged children is safe

**Ethics approval required**

Old ethics approval format

**Ethics approval(s)**

National Research Ethics Committee, Côte d'Ivoire [Comité National d'Éthique et de la Recherche (CNER) in Côte d'Ivoire], 25/08/2010, ref: 4248/2010/MSHP/CNER

**Study design**

Non-randomised interventional study

**Primary study design**

Interventional

**Study type(s)**

Prevention

**Health condition(s) or problem(s) studied**

Schistosomiasis

**Interventions**

Study participants diagnosed with either *S. mansoni*, *S. haematobium* or both species concurrently will be treated with praziquantel (single 40 mg/kg oral dose, using crushed tablets)

**Intervention Type**

Drug

**Phase**

Not Applicable

**Drug/device/biological/vaccine name(s)**

Praziquantel

**Primary outcome(s)**

Cure rate and egg reduction rate of *S. mansoni* and *S. haematobium*, determined 3-4 weeks post-treatment by multiple stool sampling using the Kato-Katz method and multiple urine filtration tests

**Key secondary outcome(s)**

Frequency and severity of adverse events recorded within 24 hours after drug administration

**Completion date**

15/10/2011

**Eligibility****Key inclusion criteria**

1. Both males and females, aged less than or equal to 72 months
2. Written informed consent by parents or legal guardian
3. Submission of two stool samples of sufficient size to prepare duplicate Kato-Katz thick smears from each sample at the baseline survey
4. Submission of two urine samples of sufficient amount for urine filtration method at the baseline survey
5. Provision of single fingerprick blood sample for malaria rapid diagnostic test and haemoglobin level assessment
6. Absence of major systemic illnesses, as assessed by medical personnel on the day of treatment

**Participant type(s)**

Patient

**Healthy volunteers allowed**

No

**Age group**

Child

**Upper age limit**

72 months

**Sex**

All

**Key exclusion criteria**

1. Children aged more than 72 months
2. No written informed consent provided by parents or legal guardian
3. Submission of less than two stool samples of sufficient size to prepare duplicate Kato-Katz smears from each sample at the baseline or follow-up survey
4. Submission of less than two urine samples of sufficient amount for urine filtration method at the baseline survey
5. No provision of fingerprick blood sample for malaria rapid diagnostic test and haemoglobin level assessment
6. Presence of any abnormal medical condition, as judged by the medical personnel on the day of treatment (e.g. clinical malaria)
7. Recent anthelmintic treatment (within 4 weeks)
8. Participation in other studies

**Date of first enrolment**

25/08/2011

**Date of final enrolment**

15/10/2011

**Locations****Countries of recruitment**

Côte d'Ivoire

Switzerland

**Study participating centre**  
Department of Epidemiology and Public Health  
Basel  
Switzerland  
4002

## Sponsor information

**Organisation**  
Swiss Tropical and Public Health Institute (Switzerland)

**ROR**  
<https://ror.org/03adhka07>

## Funder(s)

**Funder type**  
Government

**Funder Name**  
Rudolf Geigy Foundation for the benefit of the Swiss Tropical Institute and Public Health [Rudolf Geigy-Stiftung zu Gunsten des Schweizerischen Tropen- und Public Health-Instituts] (Switzerland)

## Results and Publications

**Individual participant data (IPD) sharing plan**

**IPD sharing plan summary**  
Not provided at time of registration

### Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
<a href="#">Results article</a>	results	01/08/2012		Yes	No