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Schistosomiasis intervention study

Submission date
17/11/2016

Recruitment status
No longer recruiting

Registration date
01/02/2017

Overall study status
Completed

Last Edited
30/01/2020

Condition category
Infections and Infestations

[_] Prospectively registered
[_] Protocol
[_] Statistical analysis plan
[X] Results
[_] Individual participant data

Plain English summary of protocol

Background and study aims
There is evidence that infection with the parasitic worm Schistosoma mansoni can promote replication of the Human Immunodeficiency Virus (HIV). This means that infection with this parasite might make HIV disease progress more rapidly. It also suggests that treating Schistosoma infections in people with HIV might be beneficial. This would be important in fishing communities in sub-Saharan Africa where both Schistosoma and HIV infection are common. However, previous studies have not given conclusive evidence of such a benefit. The aim of this study is to find out whether intensive treatment of S. mansoni infection with the drug praziquantel reduces HIV disease progression.

Who can participate?
HIV-positive men and women aged 18 or over with evidence of S. mansoni infection

What does the study involve?
Participants who are found to have Schistosoma mansoni infection are randomly allocated to be treated with praziquantel either once a year (the standard approach for Schistosoma control) or four times a year (intensive treatment). Participants in the standard approach group are given their first treatment three months into the study, whereas people in the intensive treatment group are treated with two doses, a week apart, immediately after they join the study. This means that, at three months, the effect of treatment versus no treatment could be compared. A comparison group of patients with HIV but no S. mansoni infection are also included in the study, and receive annual praziquantel treatment as this is routine in fishing communities where low-intensity infection might be undetected. All participants are followed up for a total of 15 months. HIV disease progression is measured from blood samples. At the end of the study the long-term effects of intensive and standard treatment are compared.

What are the possible benefits and risks of participating?
The possible benefits are screening and treatment for parasitic worm infection, which is not consistently performed even in highly exposed communities. Participants may also have the opportunity to learn their HIV status for the first time. Participants who need antiretroviral treatment for HIV are referred to start treatment. Possible risks are the side effects of the anthelminthic drugs. For praziquantel these are common, well recognised, and almost always self-limiting (resolving themselves without treatment).

Where is the study run from?
MRC/UVRI Uganda Research Unit on AIDS (Uganda)

When is the study starting and how long is it expected to run for?
December 2010 to December 2015

Who is funding the study?
Seventh Framework Programme (Belgium)

Who is the main contact?
1. Prof. Anatoli Kamali
2. Prof. Alison Elliott (alison.elliott@mrcuganda.org)

Contact information

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Scientific

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Additional identifiers

EudraCT/CTIS number

IRAS number

ClinicalTrials.gov number

Secondary identifying numbers
SIS Protocol

Study information

Scientific Title
Effects of high-intensity versus low-intensity praziquantel treatment on HIV disease progression and immunological responses among HIV and Schistosoma mansoni co-infected patients

Acronym
SIS

Study objectives
1. Schistosoma mansoni co-infection promotes HIV replication and disease progression
2. Intensive treatment of S. mansoni infection with praziquantel reduces HIV disease progression

Ethics approval required
Old ethics approval format

Ethics approval(s)
1. Research and Ethics Committee of the Uganda Virus Research Institute, 03/02/2012, ref: GC /127/12/02/01
2. Uganda National Council for Science and Technology (UNCST), 15/04/2012, ref: HS 1141

Study design
Randomised controlled open trial

Primary study design
Interventional

Secondary study design
Randomised controlled trial

Study setting(s)
Community

Study type(s)
Treatment

Participant information sheet
Not available in web format, please use contact details to request a participant information sheet

Health condition(s) or problem(s) studied
HIV, schistosomiasis

Interventions
The HIV+/schistosome+ participants were randomized to high intensity versus low intensity praziquantel treatment in the ratio of 1:1.
1. The high intensity treatment group received initial treatment with two doses of praziquantel (40 mg/kg) one week apart, followed by praziquantel every three months.
2. The low intensity treatment group received a single dose of praziquantel (40 mg/kg) once a year, the first treatment being delayed to three months from the start of the follow up, in order to determine the effects of treatment by comparison with a short-term untreated group.

A comparison group with HIV but no S. mansoni infection was also included. Initially the comparison group received no anthelminthic treatment but later an amendment was introduced such that they received annual praziquantel as this is routine in fishing communities where low intensity infection might be undetected.

The duration of treatment and follow up was 15 months.

Intervention Type
Drug

Phase
Not Applicable

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

Primary outcome measure
log10 plasma HIV-1 RNA levels, measured using the Ampliprep/Taqman V2.0 HIV-1 viral load assay at 12 and 60 weeks

Secondary outcome measures
1. Prevalence of S. mansoni, measured by parasitological examination of stool at 12 and 60 weeks
2. CD4 count, measured using Multiset™ software on a FACSCalibur at 12 and 60 weeks
3. Clinical course of HIV disease, measured by documenting clinical events such as opportunistic infections and WHO staging at all visits
4. All-cause mortality, measured at all follow-up visits

Overall study start date
15/12/2010

Completion date
31/12/2015

Eligibility

Key inclusion criteria
1. ART-naïve HIV-positive men and women with evidence of co-infection with S. mansoni
2. Aged 18 years or over
3. Not eligible for ART (CD4 count more than 350 cells/mm3 or not in WHO Stage IV and advanced stage III)

4. Willing to provide a stool sample for testing S. mansoni and other worms and accept treatment with praziquantel and albendazole
5. Willing to provide blood for viral loads, CD4 count and other blood tests
6. Able and willing to provide informed consent (literacy is not required)
7. Willing to undergo HIV testing, counseling and receive HIV test results
8. Available for follow-up for study duration
9. Able and willing to provide adequate locator information for tracking purposes, and willing to be contacted by the study staff

Participant type(s)
Patient

Age group
Adult

Lower age limit
18 Years

Sex
Both

Target number of participants
226 HIV+ S. mansoni infected individuals; 134 HIV+ S. mansoni uninfected individuals for an immunology comparison group

Total final enrolment
363

Key exclusion criteria
1. Pregnancy or planning to be pregnant during study period
2. Has taken praziquantel in the preceding 3 months
3. Symptomatic helminth infection (haemoglobin less than 8 g/dl, bloody diarrhea, clinically apparent liver disease)
4. Symptomatic complications of S.mansoni (vomiting blood, hepatosplenomegaly)
5. S. mansoni egg count more than 2000/g of stool as evidence points a high egg burden (>2000 eggs/g) highly associated with periportal fibrosis

Date of first enrolment
01/07/2013

Date of final enrolment
30/09/2014

Locations

Countries of recruitment
Uganda

Study participating centre

MRC/UVRI Uganda Research Unit on AIDS
PO Box 49
Entebbe
Uganda
n/a

Sponsor information

Organisation
Medical Research Council

Sponsor details
14th Floor
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Sponsor type
Government

Website
https://www.mrc.ac.uk

ROR
https://ror.org/03x94j517

Funder(s)

Funder type
Government

Funder Name
Seventh Framework Programme

Alternative Name(s)
EC Seventh Framework Programme, European Commission Seventh Framework Programme, EU Seventh Framework Programme, European Union Seventh Framework Programme, FP7

Funding Body Type
Government organisation

Funding Body Subtype
National government

Location

Results and Publications

Publication and dissemination plan
The main results of this trial will be published by June 2017.

Intention to publish date
01/06/2017

Individual participant data (IPD) sharing plan

IPD sharing plan summary
Data sharing statement to be made available at a later date

Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
Results article	results	03/04/2019	30/01/2020	Yes	No