Screening and treatment of malaria in pregnancy in West Africa

Alternative Title

A non-inferiority, individually randomized trial of intermittent screening and treatment versus intermittent preventive treatment in the control of malaria in pregnancy

Data Creators

Matthew Cairns, Arouna Woukeu and Harry Tagbor

Abstract

The efficacy of intermittent preventive treatment for malaria with sulfadoxine-pyrimethamine (IPTp-SP) in pregnancy is threatened in parts of Africa by the emergence and spread of resistance to SP. Intermittent screening with a rapid diagnostic test (RDT) and treatment of positive women (ISTp) is an alternative approach.

Methods

The study conducted an open, individually randomized, non-inferiority trial of IPTp-SP versus ISTp in 5,354 primi- or secundigravidae in The Gambia, Mali, Burkina Faso and Ghana. Despite the low prevalence of resistance to SP in these countries, ISTp-AL was non-inferior to IPTp-SP in preventing low birth weight (LBW), anemia and placental malaria at the primary trial endpoints. More women in the ISTp-AL than in the IPTp-SP group presented with malaria parasitemia between routine antenatal clinics, but the number of hospital admissions for malaria was similar in the two groups. In the absence of an effective alternative medication to SP for IPTp, ISTp-AL is a potential alternative to IPTp in areas where SP resistance is high. It may also have a role in areas where malaria transmission is low and for the prevention of malaria in HIV positive women receiving cotrimoxazole prophylaxis in whom SP is contraindicated.

Spatial Coverage:

Data was collected in The Gambia, Mali, Burkina Faso and Ghana

Temporal Coverage:

Data was collected between 2010 – 2012 and locked for analysis during 2013 (clinical findings) and 2014 (laboratory findings). Data held within this collection was prepared in 2015.

Quality Controls

A Data and Safety Monitoring Board (DSMB) at the London School of Hygiene & Tropical Medicine reviewed the overall conduct of the trial and approved the analytical plans. The trial was monitored by independent clinical monitors.

Species:

Human population

Privacy:

The datasets have been anonymised to remove personal identifiers. However, using information on timing of clinic visits, demographic details etc. it may be possible for individuals to be identified in the database, including by the participants themselves (self-identification). For this reason, access to the dataset is controlled. Requests for access to the data should be made using the data request form in LSHTM Data Compass.

Ethics

The trial protocol and amendments were approved by the ethics committees of each of the participating African centers and by the ethics committee of the London School of Hygiene & Tropical Medicine (table 2 in supplementary tables of the published paper).

Keywords

Malaria, Pregnancy, Intermittent Preventive Treatment in Pregnancy, Intermittent Screening and Treatment in Pregnancy, IPTp, ISTp

Project Information

Project

Data generated as part of Intermittent Preventive Treatment with Sulfadoxine-Pyrimethamine Versus Intermittent Screening and Treatment of Malaria in Pregnancy in West Africa (IPTp-SP vs. ISTp) trial. See https://clinicaltrials.gov/ct2/show/NCT01084213 for details.

Funder/Sponsor

The study was funded by the European Developing Country Clinical Trials Programme and by the Malaria in Pregnancy Consortium which is funded through a grant from the Bill and Melinda Gates Foundation to the Liverpool School of Tropical Medicine. MC is supported by a fellowship jointly funded the UK Medical Research Council (MRC) and the UK Department for International Development (DFID) under the MRC/DFID Concordat agreement.

Grant Number

EDCTP: IP.2007.31080.003

Associated Roles

Role	Forename	Surname	Faculty / Dept	Institution
Data Creator	Harry	Tagbor	ITD/DCD	London School of Hygiene & Tropical Medicine
Data Creator	Matthew	Cairns	EPH/IDE	London School of Hygiene & Tropical Medicine
Data Creator	Arouna	Woukeu	ITD/DCD	London School of Hygiene & Tropical Medicine
Project Leader	Kalifa	Bojang		Medical Research Council Unit, Fajara, The Gambia
Project Leader	Sheick Oumar	Coulibaly	Faculty of Health Sciences	University of Ouagadougou, Ouagadougou. Burkina Faso
Project Leader	Kassoum	Kayentao	Malaria Research and Training Centre, Faculty of Medicine and Odonto- stomatology,	University of Sciences, Technics and Technologies, Bamako, Mali
Project Leader	John	Williams	Navrongo Health Research Centre	Navrongo, Ghana
Project Leader	Feiko ter	Kuile		Liverpool School of Tropical Medicine, Liverpool, UK
Project Leader	Paul	Milligan	EPH/IDE	London School of Hygiene & Tropical Medicine
Project Leader	Daniel	Chandramohan	ITD/DCD	London School of Hygiene & Tropical Medicine
Project Leader	Brian	Greenwood	ITD/DCD	London School of Hygiene & Tropical Medicine
Data Manager	Ismaela	Abubakar		Medical Research Council Unit, Fajara, The Gambia
Data Manager	Timothy	Awine		Navrongo Health Research Centre, Navrongo, Ghana

	Screening and	reatment of maia	ria in pregnancy in West Afric	a
Researcher	Francis	Akor		Medical Research Council
				Unit, Fajara, The Gambia
Researcher	Khalifa	Mohammed		Medical Research Council
				Unit, Fajara, The Gambia
Researcher	Richard	Bationo	Faculty of Health Sciences	University of Ouagadougou,
				Ouagadougou. Burkina Faso
Researcher	Edgar	Dabira	Faculty of Health Sciences	University of Ouagadougou,
	A1 ·	6 1	5 h fu hi c	Ouagadougou. Burkina Faso
Researcher	Alamissa	Soulama	Faculty of Health Sciences	University of Ouagadougou,
Researcher	Moussa	Djimdé	Malaria Research and	Ouagadougou. Burkina Faso University of Sciences,
Researcher	ivioussa	Djiiiide	Training Centre, Faculty of	Technics and Technologies,
			Medicine and Odonto-	Bamako, Mali
			stomatology	Barriako, Mari
Researcher	Etienne	Guirou	Malaria Research and	University of Sciences,
			Training Centre, Faculty of	Technics and Technologies,
			Medicine and Odonto-	Bamako, Mali
			stomatology	
Researcher	Stephen	Quaye		Navrongo Health Research
				Centre, Navrongo, Ghana
Researcher	Fanta	Njie		Medical Research Council
				Unit, Fajara, The Gambia
Researcher	Jaume	Ordi	Barcelona Centre for	Hospital Clinic-Universitat de
			International Health	Barcelona, Barcelona, Spain
			Research (CRESIB), Department of Pathology	
Researcher	Ogobara	Doumbo	Malaria Research and	University of Sciences,
Researcher	Ogobara	Dodnibo	Training Centre, Faculty of	Technics and Technologies,
			Medicine and Odonto-	Bamako, Mali
			stomatology,	,
Researcher	Abraham	Hodgson		Navrongo Health Research
				Centre, Navrongo, Ghana
Researcher	Abraham	Oduro		Navrongo Health Research
				Centre, Navrongo, Ghana
Researcher	Steve	Meshnick	Gillings School of Global	University of North Carolina,
	C.	- 1	Public Health	Chapel Hill, USA
Researcher	Steve	Taylor		Duke University Medical
Posoprehor	Daccal	Magnussan	Institute of International	Center, Durham, NC, USA
Researcher	Pascal	Magnussen	Institute of International Health, Immunology and	University of Copenhagen, Copenhagen, Denmark
			Microbiology and Institute of	Copennagen, Denniark
			Veterinary Disease Biology	
User Guide authors	Matthew	Cairns	EPH/IDE	London School of Hygiene &
			,	Tropical Medicine
User Guide authors	Gareth	Knight	Research Data Service	London School of Hygiene &
		Ū		Tropical Medicine

Data Collection Description

Title	Filename	File type	Description
Main study file	1_main_study_file.dta	Stata Data File	The dataset contains 5354 records, each of which relates to a study participant (a primi- or secundi-gravid pregnant woman enrolled in one of the study centres in Burkina Faso, the Gambia, Ghana or Mali). Information in the database includes: information on demographic factors obstetric information information on interventions received information obtained at different ANC visits during the study period details of the outcomes of pregnancy The dataset can be used to verify all results outlined in the associated paper and supplement, with the exception of those shown in the other files listed in this table (congenital abnormalities, and results related to unscheduled illness visits).
	1_main_study_file.csv	Comma Separated Values	CSV version of the above file
	1_data_dictionary_main_study_file.do cx	Microsoft Word Document	Data Dictionary, variable names, codes, units of measurement
Congenital abnormalities	2_congenital_abnormalities.dta	Stata Data File	This dataset shows the reported congenital abnormalities by study ID and study group. The 5321 individuals with no ca_details are those without a congenital abnormality. Variables are labelled in the Stata file, and further details are given in the corresponding data dictionary file.
	2_congenital_abnormalities.csv	Comma Separated Values	CSV version of the above file
	2_data_dictionary_congenital_abnorm alities.docx	Microsoft Word	Data Dictionary, variable names, codes, units of measurement
Unscheduled clinic visits	3_illness_file_long_for_archive.dta	Stata Data File	This dataset contains records of each illness visit. Women who experienced multiple illness episodes are listed in an equivalent number of records.

	<u>. </u>		· · ·
			The dummy variable illvisit indicates illness episodes: if equal to 1, the record reports an illness episode, if not equal to one (missing) the woman listed did not have an unscheduled illness visit during the study.
	3_illness_file_long_for_archive.csv	Comma Separated Values	.csv version of the above file.
	3_illness_file_single_record_per_subje ct_for_archive.dta		Unscheduled illness visits arranged as a single record per woman, to allow tabulation of number of visits per woman by study group, etc.
	3_illness_file_single_record_per_subje ct_for_archive.csv		CSV version of the above file
	3_data_dictionary_unscheduled_illnes s_visits.docx	Word Document	Data Dictionary, variable names, codes, units of measurement
Symptoms at unscheduled visits	4_symptoms_at_illness_episodes_LON G_for_archive.dta	Stata Data File	Dataset contains a breakdown of the common symptoms experienced at the time of illness visits. Each record denotes a single illness visit. Women who experienced more than one illness episode are listed in multiple records.
			The dummy variable illvisit indicates illness episodes: if equal to 1, the record reports an illness episode, if not equal to one (missing) the woman listed did not have an unscheduled illness visit during the study.
	4_symptoms_at_illness_episodes_LON G_for_archive.csv	Comma Separated Values	CSV version of the above file.
	4_data_dictionary_symptoms_at_unsc heduled_illness_visits.docx	Word Document	Data Dictionary, variable names, codes, units of measurement