

Oral ranitidine is effective in treating toddler's diarrhea

Submission date 04/08/2016	Recruitment status No longer recruiting	☐ Prospectively registered ☒ Protocol
Registration date 09/08/2016	Overall study status Completed	☐ Statistical analysis plan ☒ Results
Last Edited 13/10/2022	Condition category Digestive System	☐ Individual participant data

Plain English summary of protocol

Background and study aims

Toddler's diarrhea or chronic non-specific diarrhea of childhood is a common cause of persistent loose stools in children under-five. It has been defined as diarrhea lasting more than 3 weeks in a toddler who has normal weight and height, without being caused by a tummy bug (viral infection). Low-fat diets and the consumption of fruit juices, especially juices high in sorbitol (a type of sweetener) and those with high fructose (fruit sugar) are thought to play a role in this. Changing the diet and reducing the amount the child drinks have been suggested as potential treatments. Other studies have shown that some probiotics (so called 'good' bacteria) may also be effective in reducing symptoms. It has been noted however that following a strict diet can be difficult and so a safe medication treatment may be easier. Ranitidine is a medication which is used to lower the amount of acid produced by the stomach. The aim of this study is to investigate the effectiveness of ranitidine and probiotics in the treatment of Toddler's diarrhea.

Who can participate?

Children aged 1-3 years who have had diarrhea for at least three weeks which is not caused by an infection.

What does the study involve?

Participants are randomly allocated to one of three groups. Children in the first group are given ranitidine by their caregiver once a day for 10 days in the form of dissolvable tablets. Children in the second group are given probiotics by their caregiver once a day for 10 days in the form of a powder that can be made into a liquid solution. Children in the third group are given a placebo (dummy), which consists of vitamin C, by their caregiver once a day for 10 days in the form of dissolvable tablets. For all groups, care-givers of participating children are asked to record the frequency and consistency of the child's stool after 5, 10 and 30 days.

What are the possible benefits and risks of participating?

Not provided at time of registration

Where is the study run from?

1. University of Nigeria Teaching Hospital (Nigeria)
2. Enugu State University Teaching Hospital (Nigeria)
3. Federal Medical Centre (Nigeria)

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

May 2016 to October 2019

Who is funding the study?

African Research League (USA)

Who is the main contact?

1. Dr Samuel Uwaezuoke (scientific)
2. Dr Ikenna Ndu (public)

Contact information

Type(s)

Scientific

Contact name

Dr Samuel Uwaezuoke

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Type(s)

Public

Contact name

Dr Ikenna Ndu

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Additional identifiers

Protocol serial number

Study information

Scientific Title

Short course of daily oral ranitidine versus probiotics as a novel effective treatment for toddler's diarrhea: a multi-centre, double-blind randomized controlled clinical trial

Study objectives

Ranitidine is more effective than probiotics in the treatment of toddler's diarrhea.

Ethics approval required

Old ethics approval format

Ethics approval(s)

University of Nigeria Teaching Hospital Health Research Ethics Committee, 19/05/2016, ref: NHREC/05/01/2008B-FW00002458-1RB00002323

Primary study design

Interventional

Study design

Multi-centre double-blind three-arm randomized controlled trial

Study type(s)

Treatment

Health condition(s) or problem(s) studied

Toddler's diarrhea (chronic non-specific diarrhea of childhood)

Interventions

Participants are randomised to one of three groups, using colour-coded envelopes.

Ranitidine Group: Participants receive dissolvable tablets of ranitidine (3 mg/kg/day), administered daily by caregivers for 10 days.

Probiotic Group: Participants receive probiotics in powdery form for solution, in age-specific doses, administered daily by caregivers for 10 days.

Control Group: Participants receive a placebo in the form of dissolvable tablets of vitamin C (50 mg) administered daily by caregivers for 10 days.

Follow-up/outcome measures: Stool frequency and consistency will be recorded on days 5 and 10. Any adverse drug reactions will be noted on these follow-up days. There will also be a follow-up documentation of stool frequency and consistency at 30 days.

Intervention Type

Drug

Phase

Not Applicable

Drug/device/biological/vaccine name(s)

1. Ranitidine 2. Lyophilized lactic acid bacteria

Primary outcome(s)

1. Stool frequency is measured using care-giver's home observation/records on days 5, 10 and 30
2. Stool consistency is measured using care-giver's home observation/records on days 5, 10 and 30

Key secondary outcome(s)

No secondary outcome measures

Completion date

30/10/2019

Eligibility**Key inclusion criteria**

1. Age range of 1-3 years
2. Diarrhea lasting 3 weeks or more
3. Characteristic stooling pattern of toddler's diarrhea
4. Absence of pyrexia and signs of dehydration
5. Normal anthropometry
6. Normal findings on stool analysis, microscopy and culture

Participant type(s)

Patient

Healthy volunteers allowed

No

Age group

Child

Lower age limit

1 Years

Upper age limit

3 Years

Sex

All

Total final enrolment

40

Key exclusion criteria

1. Signs of dehydration
2. Presence of pyrexia
3. Abnormal anthropometry

Date of first enrolment

30/07/2016

Date of final enrolment

01/03/2019

Locations

Countries of recruitment

Nigeria

Study participating centre

University of Nigeria Teaching Hospital

Ituku-Ozalla

Enugu

Nigeria

400001

Study participating centre

Enugu State University Teaching Hospital

Enugu

Nigeria

400001

Study participating centre

Federal Medical Centre

Owerri

Nigeria

400001

Sponsor information

Organisation

African Research League

Funder(s)

Funder type

Research organisation

Funder Name

African Research League

Results and Publications

Individual participant data (IPD) sharing plan

The data sharing plans for the current study are unknown and will be made available at a later date.

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	11/08/2020	14/08/2020	Yes	No
Basic results		31/07/2019	31/07/2019	No	No
Basic results		09/09/2019	09/09/2019	No	No
Other files	Brief curriculum vitae of co-investigator (AdaAyuk)		13/10/2022	No	No
Protocol file			10/10/2022	No	No