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Long-term follow-up of children who participated at 9-12 months of age in clinical trial PsA-TT-007 in Mali

Submission date
09/12/2016

Recruitment status
No longer recruiting

Registration date
19/12/2016

Overall study status
Completed

Last Edited
29/10/2020

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
MenAfriVac is a vaccine used for preventing disease caused by meningococcus A germs. This germ can cause meningitis, an infection in the brain and in blood. Meningitis can cause brain damage, deafness, loss of limbs and even death. In Mali, meningitis occurs in a large number of people during the dry season every year. There are many groups of meningococcus germs. These groups are identified by different letters (including A, B, C, W-135, X and Y). Group A causes the majority of meningitis in Mali. MenAfriVac has been given to millions of people in many African countries including Mali. MenAfriVac (10µg) was the vaccine used in Mali's 2010 national campaign for 1-29 year olds. It will be used again in 2017 for the catch-up campaign for 1-5 year olds (born after the first campaign). There is also a half-dose (5µg) of this vaccine called MenAfriVac5. MenAfriVac5 will now be offered to all infants at 9 months of age in Mali. A previous study called Study PSA-TT-007 looked at the 5µg and 10µg doses of MenAfriVac between March 2012 and September 2013 in Mali. The aim of the current study is to collect information on the antibodies (protective substances against meningococcus A and other diseases) in former PsA-TT-007 participants' blood, as well unvaccinated children of the same age.

Who can participate?
Children under 6 years of age who took part in Study PsA-TT-007 and unvaccinated children of the same age.

What does the study involve?
All participants have a blood sample taken piror to the national catch-up campaign. The blood will be tested in a lab to check for antibodies against meningococcus A. In a random sample of participants, two further samples will be taken 28 days and 6 months following the catch-up campaign.

What are the possible benefits and risks of participating?
There are no direct benefits from taking part in the study. There are no notable risks to participating other than possible discomfort during blood collection.

Where is the study run from?
Center for Vaccine Development Mali (Mali)

When is the study starting and how long is it expected to run for?
May 2014 to December 2017

Who is funding the study?
Bill and Melinda Gates Foundation (USA)

Who is the main contact?
Ms Corey Kelly

Contact information

Type(s)
Public

Contact name
Dr Niranjan Bhat

Contact details
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Additional identifiers

EudraCT/CTIS number

IRAS number

ClinicalTrials.gov number

Secondary identifying numbers
Pers-007

Study information

Scientific Title
A Phase IV, open-label, controlled study to evaluate the up-to-four-year antibody persistence among Malian children who previously received different doses and schedules of meningococcal conjugate group A vaccine (PsA-TT 5µg or 10µg) between 9 and 18 months of age and to assess the boosting effect following a catch-up campaign dose of MenAfriVac® (PsA-TT 10µg)

Study objectives
Group A meningococcal serum antibodies will persist in children approximately four years after receipt of one or two doses of PsA-TT (5µg or 10µg polysaccharide concentration) initiated at 9-12 months of age.

Ethics approval required
Old ethics approval format

Ethics approval(s)
University of Maryland, Baltimore, Institutional Review Board, 30/11/2016, ref: HP-00072598

Study design
Longitudinal observational epidemiological study

Primary study design
Observational

Secondary study design
Epidemiological study

Study setting(s)
Community

Study type(s)
Prevention

Participant information sheet
No participant information sheet available

Health condition(s) or problem(s) studied
Meningococcal serogroup A

Interventions
Serum anti-MenA antibody levels will be measured in study participants at one or three time points, for controls as well as former PsA-TT-007 participants. The first blood draw will be performed on the day of enrollment, prior to the Mali national catch-up campaign for MenAfriVac. In a random subset of 280 participants, a second follow-up visit will be scheduled approximately 28 days after receiving a dose of MenAfriVac through the national catch-up campaign, and a third visit will be scheduled approximately 6 months after receiving the campaign dose.

Intervention Type
Other

Primary outcome measure
Geometric mean titer (GMT) for MenA-specific serum antibody as measured by serum bactericidal antibody assay using rabbit complement (rSBA) approximately four years following primary immunization.

Secondary outcome measures

With respect to the immune persistence time point, which will occur approximately four years following primary immunization:
1. The percentage of participants with a MenA antibody titer ≥ 1:8, and ≥ 1:128, as measured by rSBA assay
2. The geometric mean concentrations (GMC) for serogroup A-specific IgG concentrations, as measured by ELISA
3. The percentage of participants with serogroup A-specific IgG concentration ≥ 2 µg/ml, and ≥ 1 µg/ml, as measured by ELISA
Meningitis A Vaccine Sustainability Project
4. The reverse cumulative distribution curves for MenA antibody titers as measured by rSBA assay, and for MenA-specific IgG concentrations as measured by ELISA

With respect to the time points of approximately 28 days and 180 days following receipt of a single dose of MenAfriVac through a national catch-up campaign:
1. The geometric mean titer (GMT) for MenA-specific serum antibody, as measured by rSBA assay
2. The percentage of participants demonstrating a ≥ 4-fold rise (i.e. seroconversion) in MenA antibody titers, when compared to the pre-campaign (persistence) timepoint titer, as measured by rSBA assay
3. The geometric mean concentrations (GMC) for MenA-specific IgG concentrations, as measured by ELISA
4. The ratio of GMC for MenA-specific IgG concentration in relation to the pre-campaign (persistence) time point, as measured by ELISA
5. The percentage of participants who demonstrate a ≥ 2-fold rise and a ≥ 4-fold rise in MenA-specific IgG concentration (i.e. seroconversion) with respect to pre-campaign (persistence) MenA-specific IgG concentration, as measure by ELISA
6. The percentage of participants with a MenA antibody titer ≥ 1:8, and ≥ 1:128, as measured by rSBA assay
7. The percentage of participants with MenA-specific IgG concentration ≥ 2 µg/ml, and ≥ 1 µg/ml, as measured by ELISA
8. The reverse cumulative distribution curves for MenA antibody titers as measured by rSBA assay and for MenA-specific lgG concentrations as measured by ELISA

Overall study start date
01/05/2014

Completion date
01/12/2017

Eligibility

Key inclusion criteria
Former Study PsA-TT-007 participants:
1. Received study vaccine (PsA-TT 5µg or 10µg)
2. Final evaluable blood collection must have been completed within 3 months after the second vaccination
3. Younger than 6 years of age as of March 1st, 2017
4. Written informed consent obtained from the participants' parent(s) or guardian following international ethical guidelines for epidemiological studies and applicable local ethical guidance and requirements (added 27/02/2017)

Control participants:
1. Born between March 2011 and March 2012
2. No evidence of chronic disease
3. Younger than 6 years of age as of March 1st, 2017
4. Written informed consent obtained from the participants' parent(s) or guardian following international ethical guidelines for epidemiological studies and applicable local ethical guidance and requirements (added 27/02/2017)

Participant type(s)
Healthy volunteer

Age group
Child

Upper age limit
6 Years

Sex
Both

Target number of participants
825

Key exclusion criteria
Exclusion criteria as of 27/02/2017:
1. Received meningococcal vaccination outside the PsA-TT-007 study (all participants, conjugate or polysaccharide)
2. Any chronic condition or medical/hereditary history suggesting participant would be immunocompromised (i.e. primary immunodeficiency, HIV, autoimmune disease)
3. Chronic administration (defined as more than 14 days) of immunosuppressant or other immune-modifying agents within the past three months (including systemic or inhaled corticosteroids, this means prednisone or equivalent, ≥0.5 mg/kg/day; topical steroids are allowed)
4. Administration of immunoglobulins and/or any blood products within the last 90 days.
5. Residence outside the study area for any prolonged period since birth (at the discretion of the PI) such that the potential for exposure to circulating N. meningitidis serogroup A may differ from the rest of the population (control participants only)
6. Intent to move out of the study population within the period of study conduct
7. Any condition or criteria that in the opinion of the investigator might compromise the well-being of the participant or compliance with study procedures or interfere with the outcome of the study

Original exclusion criteria:
Former Study PsA-TT-007 participants:
1. Received meningococcal vaccination outside the PsA-TT-007 study (all participants, conjugate or polysaccharide)
2. Any chronic condition or medical/hereditary history suggesting participant would be immunocompromised (i.e. primary immunodeficiency, HIV, autoimmune disease)
3. Chronic administration (defined as more than 14 days) of immunosuppressant or other immune-modifying agents within the past three months (including systemic or inhaled

corticosteroids, this means prednisone or equivalent, ≥0.5 mg/kg/day; topical steroids are allowed)
4. Administration of immunoglobulins and/or any blood products within the last 90 days.

Control participants:
1. Residence outside the study area for any prolonged period since birth (at the discretion of the PI) such that the potential for exposure to circulating N. meningitidis serogroup A may differ from the rest of the population
2. Intent to move out of the study population within the period of study conduct
3. Any condition or criteria that in the opinion of the investigator might compromise the well-being of the participant or compliance with study procedures or interfere with the outcome of the study

Date of first enrolment
06/12/2016

Date of final enrolment
06/03/2017

Locations

Countries of recruitment
Mali

Study participating centre
Center for Vaccine Development Mali
Center for Vaccine Development MALI
CVD-MALI Ex Institut Marchoux
Djicoroni Para Avenue Mohamed VI
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Mali
BP251

Sponsor information

Organisation
PATH

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Sponsor type
Other

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ROR
https://ror.org/02ycvrx49

Funder(s)

Funder type
Charity

Funder Name
Bill and Melinda Gates Foundation

Alternative Name(s)
Bill & Melinda Gates Foundation, Gates Foundation, BMGF, B&MGF, GF

Funding Body Type
Government organisation

Funding Body Subtype
Trusts, charities, foundations (both public and private)

Location
United States of America

Results and Publications

Publication and dissemination plan
Planned publication in a high-impact peer reviewed journal.

Intention to publish date
31/12/2018

Individual participant data (IPD) sharing plan
The current 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?
Basic results		16/10/2020	23/10/2020	No	No