ISRCTN95296852 https://doi.org/10.1186/ISRCTN95296852

# Global assays for haemophilia

**Submission date**
19/06/2015

**Recruitment status**
No longer recruiting

**Registration date**
23/07/2015

**Overall study status**
Completed

**Last Edited**
23/04/2018

**Condition category**
Haematological Disorders

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

## Plain English summary of protocol

Background and study aims
Haemophilia A is an inherited clotting disorder primarily affecting males. It is caused by having a low level of a clotting factor called factor VIII (FVIII). Haemophilia B is also caused by low levels of a clotting factor and this is caused by having a reduction in factor IX (FIX). Haemophilia (both A and B) increases the risk of bleeding, particularly in the joints and muscles. Patients with factor levels of <1% are defined as having severe haemophilia, patients with levels between 1-4% are said to suffer from moderate disease and patients with levels of 5% or greater are said to suffer from mild Haemophilia defined as mild disease. Patients with severe haemophilia are at greatest risk of spontaneous bleeds (bleeding for no reason) and require regular treatment with intravenous infusions of clotting factors to prevent bleeding. At the moment monitoring of treatment and predicting the likely risk of bleeding for patients with haemophilia is determined using a standard clotting test, where the factor VIII or factor IX is measured. But not all patients with similar clotting factor levels (both baseline levels and post-treatment levels) have the same tendency for bleeding. Newer clotting tests: known as 'global haemostasis assays' may be better at telling doctors whether a patient will be more or less likely to bleed after treatment. These tests look at lots of different, interacting parts of the clotting system. This study will tests two global clotting tests: thrombin generation and a viscoelastic test called rotational thromboelastometry (ROTEM). These tests will be evaluated and compared to standard tests, both to see if these tests are accurate and also to see if they correlate better with patients' bleeding risks.

Who can participate?
Adult men (aged at least 18) diagnosed with haemophilia.

What does the study involve?
Participants are asked to provide one or two additional aliquots of blood (5.4 ml citrated blood) for this study whilst undergoing routine clinical assessment. No additional blood draws are requested over and above the samples that are taken at the time of the patients' routine blood draws. All patients with haemophilia are routinely assessed at each clinic appointment by means of at least one blood sample; a 'baseline' blood sample is taken for testing either factor VIII or factor IX levels. Patients who require prophylactic treatment (regular infusions) routinely have two blood samples taken in clinic: a trough level and a post-infusion level. A trough sample is a blood test taken just before the next dose of clotting factor is required and gives an estimate of how much of the factor remains in a patient's blood stream. The trough level can be used to

guide ongoing therapy. The post-infusion level provides information about how much the factor level rises in the blood stream after an injection.

What are the possible benefits and risks of participating?
There are no risks and no immediate benefits from taking part in this study.

Where is the study run from?
Oxford Haemophilia & Thrombosis Centre (UK)

When is the study starting and how long is it expected to run for?
October 2015 to March 2016

Who is funding the study?
Blood Coagulation and Research Fund, Oxford Haemophilia and Thrombosis Centre (OHTC) (UK)

Who is the main contact?
Dr Nicola Curry
nicola.curry@ouh.nhs.uk

# Contact information

### Type(s)
Public

### Contact name
Dr Nicola Curry

### Contact details
Oxford Haemophilia & Thrombosis Centre
Oxford
United Kingdom
OX3 7LE
01865 225316
nicola.curry@ouh.nhs.uk

### Type(s)
Scientific

### Contact name
Dr Nicola Curry

### Contact details
Oxford Haemophilia & Thrombosis Centre
Oxford
United Kingdom
OX3 7LE
01865 225316
nicola.curry@ouh.nhs.uk

# Additional identifiers

### EudraCT/CTIS number

### IRAS number

### ClinicalTrials.gov number

### Secondary identifying numbers
1.0

# Study information

### Scientific Title
Global haemostasis assays: their use in patients with haemophilia

### Study objectives
This is an observational study evaluating the utility of global haemostasis assays (i.e. thrombin generation (TGT) and thromboelastometry (ROTEM)) in assessing haemostatic ability in haemophilia patients. the primary objectives are to: find a normal range for TGT and ROTEM for both haemophilia and control subjects and to determine the reproducibility of these assays. Secondary objectives are: to correlate clinical outcomes in patients with haemophilia with TGT and ROTEM values and to compare these results with standard laboratory factor assay measurements.

### Ethics approval required
Old ethics approval format

### Ethics approval(s)
NRES Committee South Central - Oxford C, 15/07/2015, ref: 15/SC/0316

### Study design
Single-centre observational study

### Primary study design
Observational

### Secondary study design
This is a laboratory study evaluating global assays of haemostasis

### Study setting(s)
Hospital

### Study type(s)
Other

### Participant information sheet
Not available in web format, please use the contact details to request a patient information sheet.

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

This study is evaluating newer global blood clotting tests and their use and reproducibility in patients with haemophilia A and haemophilia B.

### Interventions
Participants will be asked to provide one or two additional aliquots of blood (5.4 ml citrated blood) for this study whilst undergoing routine clinical assessment. No additional blood draws will be requested over and above the samples that are taken at the time of the patients' routine blood draws.
All patients with haemophilia are routinely assessed at each clinic appointment by means of at least one blood sample; a 'baseline' blood sample is taken for testing either factor VIII or factor IX levels.
Patients who require prophylactic treatment (regular infusions) routinely have two blood samples taken in clinic: a trough level and a post-infusion level. A trough sample is a blood test taken just before the next dose of clotting factor is required and gives an estimate of how much of the factor remains in a patient's blood stream. The trough level can be used to guide ongoing therapy. The post-infusion level provides information about how much the factor level rises in the blood stream after an injection.

### Intervention Type
Other

### Primary outcome measure
The primary outcome is to find a normal range for thrombin generation and ROTEM measures in patients with haemophilia as measured by evaluating a blood sample at time 0 hours. The blood will be tested for thrombin generation and for whole blood viscoelastometric measures which are both global measures of coagulation.

### Secondary outcome measures
Secondary outcome will be to correlate the laboratory tests with clinical outcome. Thrombin generation measures and ROTEM measures will be compared at time 0 hours and correlated with the number of joint bleeds that a patient has as measured using an annualised bleeding rate.

### Overall study start date
01/10/2015

### Completion date
31/03/2016

## Eligibility

### Key inclusion criteria
1. Participant is willing and able to give informed consent for participation in the study
2. Male, aged 18 years or above
3. Diagnosed with haemophilia A or B

### Participant type(s)
Patient

**Age group**
Adult

**Lower age limit**
18 Years

**Sex**
Male

**Target number of participants**
50

**Key exclusion criteria**
Concomitant use of pro-haemostatic agents such as tranexamic acid or anti-coagulant agent

**Date of first enrolment**
01/10/2015

**Date of final enrolment**
31/03/2016

# Locations

**Countries of recruitment**
England

United Kingdom

**Study participating centre**
**Oxford Haemophilia & Thrombosis Centre**
Churchill Hospital
Old Road
Headington
Oxford
United Kingdom
OX3 7LE

# Sponsor information

**Organisation**
Oxford University Hospitals NHS Trust

**Sponsor details**
Research & Development, Churchill Hospital, Joint Research office, Block 60
Oxford

England
United Kingdom
OX3 7LE

### Sponsor type
Hospital/treatment centre

### ROR
https://ror.org/03h2bh287

## Funder(s)

### Funder type
Not defined

### Funder Name
Blood Coagulation and Research Fund, Oxford Haemophilia and Thrombosis Centre (OHTC)

## Results and Publications

### Publication and dissemination plan
This study will be published as part of a MSc thesis and will also be submitted for publication as a short report in a peer reviewed journal. We will intend to publish the laboratory data within 12 months of completing the study.

### Intention to publish date
31/03/2017

### Individual participant data (IPD) sharing plan
The datasets generated during and/or analysed during the current study are not expected to be made available as consent was not obtained from the patients.

### IPD sharing plan summary
Not expected to be made available

### Study outputs

| Output type | Details | Date created | Date added | Peer reviewed? | Patient-facing? |
|---|---|---|---|---|---|
| Results article | results | 01/02/2019 | | Yes | No |
| HRA research summary | | | 28/06/2023 | No | No |