Discriminating between Thalasssemia from patients with iron deficiciency with red blood cell measurements.

No registrations found.

Ethical review	Positive opinion
Status	Pending
Health condition type	-
Study type	Observational non invasive

Summary

ID

NL-OMON22102

Source
Nationaal Trial Register

Brief title
Thalascreen

Health condition

Alpha-Thalassemia
Beta-Thalassemia
Iron deficiency
Hereditary hemochromatosis

Sponsors and support

Primary sponsor: University Medical Center Utrecht
Source(s) of monetary or material Support: RR Mechatronics

Intervention

Outcome measures

Primary outcome

Red blood cell deformability

Secondary outcome

Investigating underlying pathophysiological mechanisms of RBCs in thalassemia and iron disorders. Correlating clinical data, morphology of RBCs, haematological parameters and iron status to red blood cell deformability.

Study description

Background summary

Alpha- and beta-thalassemias are hemoglobinopathies in which a defect in alpha or beta globin chain production causes ineffective erythropoiesis and hemolysis, resulting in a microcytic anemia. Iron deficiency causes no hemolysis but results in microcytic anemia as well. Iron overload causes oxidative damage to red blood cells(RBCs). Many patients with hemoglobinopathies have either iron overload or iron deficiency. Their deformability will thus be influenced by their hemoglobinopathy and/or iron status. To delineate these interactions we will investigate changes in deformability of different hemoglobinopathies and iron status by using the Laser optical rotational cell analyser (Lorca), a next generation ektacytometer.

Study objective

With the Lorrca which measures red blood cell deformability patients with thalassemia show a different profile than patients with iron deficiency.

Study design

1

Intervention

Not applicable

Contacts

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Eligibility criteria

Inclusion criteria

1. > 18 years

2. No blood transfusion within the past 3 months

3. Have alpha-thalassemia trait, homozygous alpha thalassemia, Hemoglobin H disease or other very severe forms of alpha-thalassemia, beta-thalassemia intermedia, iron deficiency anemia or hereditary hemochromatosis

4. Be able to give informed consent

Exclusion criteria

1. Suffering from a serious condition

2. Fever at time of venepuncture

3. Inflammatory condition at time of venepuncture

4. Not able to give informed consent

5. Blood transfusion in past 3 months

6. Intra venous iron therapy in past 6 months

Study design

Design

Study type:	Observational non invasive
Intervention model:	Other

Control: N/A , unknown

Recruitment

NL

Recruitment status:	Pending
Start date (anticipated):	01-11-2017
Enrollment:	132
Type:	Anticipated

Ethics review

Positive opinion

Date:	26-10-2017
Application type:	First submission

Study registrations

Followed up by the following (possibly more current) registration

ID: 46020
Bron: ToetsingOnline
Titel:

Other (possibly less up-to-date) registrations in this register

No registrations found.

In other registers

Register	ID
NTR-new	NL6016
NTR-old	NTR6780
CCMO	NL56731.041.16
OMON	NL-OMON46020

Study results