

Trans-cranial Dopplers (TCD)

Information for patients, relatives and carers

Introduction

This leaflet has been provided to help answer some of the questions you or those who care for you may have. It is not meant to replace the consultation between you and your healthcare team, but aims to help you understand more about what you discussed together.

As part of your child's care in the sickle cell clinic, we are now offering TCD as a regular screening test between the ages of two and sixteen. By using screening tests, such as blood tests and TCD, we aim to detect and treat any problems at an early stage.

What is a Trans-cranial Doppler Scan (TCD)?

A Doppler machine uses an ultrasound probe (similar to the ultrasound test used during pregnancy), to detect the rate of blood flow in blood vessels. Placing the probe over blood vessels (arteries) in the head and neck allows the speed of blood flow to be measured in some of the arteries supplying the brain. If arteries are narrow, the blood travels faster through the narrowed area and makes a higher pitched noise.

In most children with sickle cell disease, the TCD result is normal, but if it is abnormal we may need to repeat it or do further tests to check the arteries. It is recommended that all children have had this screening test by three years of age and then yearly thereafter.

Why test children with sickle cell disease for abnormal blood flow?

In some children with sickle cell disease, abnormally fast blood flow in their arteries of the brain may indicate a narrowing. This may reduce the blood flow to part of the brain, and if it is very reduced, it may increase the risk of having a stroke in the future.

What are the benefits?

By having the TCD test we aim to detect problems related to blood flow to the brain at an early stage. We can then discuss with you the need for more detailed tests and treatment options to try and prevent the development of more serious problems such as having a stroke.

There are no known risks associated with this test

What will happen when my child has TCD screening?

The Doppler scan takes place in the **Irvine Vascular Studies Department**, which is on the ground floor of the **Mary Stanford Wing on South Wharf Road, opposite the main QEQM building**. Turn right when you enter the Mary Stanford Wing and the department is signposted. The phone number of the Irvine Vascular Department is **0207 886 3739**.

The test usually takes about 30 minutes, but with younger children it may take longer. The test is painless, but your child needs to be relaxed and still during the test. He or she will be awake and lying on a couch during the test and you will be able to stay with him or her.

What happens after the test?

The results will be given to the consultant paediatric haematologists for their interpretation. If the test is normal, we will simply plan to repeat the test every year. If the results show fast blood flow, indicating possible blood vessel narrowing, or do not give clear results we will probably arrange another TCD test within a few weeks.

We may also arrange other tests, such as a brain scan called an MRI (Magnetic Resonance Imaging and Angiography), another painless scan to check the brain and its blood vessels in more detail. We will talk to you and explain what the results mean and what treatment options are available.

Contacts

Clinical Nurse Specialist,
Paediatric Haemoglobinopathies,
7th Floor QEQM Building

Tel: **020 3312 3346**
Mobile: **07795651153**

Paediatric Secretaries
The Irvine Vascular Department

020 3312 6157
0207 886 3739.

How do I make a comment about my treatment?

We aim to provide the best possible service and staff will be happy to answer any of the questions you may have. If you have any suggestions or comments about your visit, please either speak to a member of staff or contact the patient advice and liaison service (PALS) 020 3313 0088 (Charing Cross). PALS staff are able to listen to your concerns, suggestions or queries and help sort out problems on your behalf. Visit www.imperial.nhs.uk/pals for more information.

Alternatively, you may wish to express your concerns in writing to:
The Managing Director, Imperial College Healthcare NHS Trust
Trust Headquarters, The Bays, South Wharf Road, London W2 1NY

Alternative formats

This leaflet can be provided on request in large print, as a sound recording, in Braille, or in alternative languages. Please contact the communications team on **020 3312 5592**.