Great Ormond Street Hospital for Children NHS Trust

Great Ormond Street
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Tel: 020 7405 9200

ENLIVEN TRIAL

Endoscopic Lavage after Intraventricular Haemorrhage in Neonates

Parent / Guardian Information and Consent Form
Version 4.0
27th April 2017

We would like to invite your baby to take part in our research study. Before you decide we would like you to understand why the research is being done and what it would involve for you and your baby. One of our team will go through this information sheet with you and answer any questions you may have.

PART 1

Why is this study needed?

Being born prematurely can be dangerous for the developing brain. In very tiny babies the blood vessels in the brain are fragile and not completely developed which makes them prone to break and cause bleeding. In some cases the bleeding can extend out of the brain tissue and into the fluid compartments or 'ventricles' of the brain a condition known as intraventricular haemorrhage.

Normally, the cerebrospinal fluid (CSF) that is continuously produced inside the ventricles drains out of the brain and is then absorbed into the circulation. However after an intraventricular haemorrhage blood inside the ventricles can clog up the drainage system, causing a build up of fluid in the brain, much like a rock in a stream damming the flow. The increased pressure placed on the brain when ventricles enlarge leads to a condition called hydrocephalus, which if left untreated can lead to disability or death.

To relieve the pressure within the ventricle a tube is placed that allows the CSF to drain from the ventricle into a space under the scalp (ventricular-subgaleal shunt), providing a release valve so the fluid pressure cannot build up. This is vital and life saving surgery and is the best way we know for treating this problem.

Currently, a ventriculo-subgaleal shunt is placed by making a small hole (burr hole) in the skull before threading a small tube through the brain into the ventricle, with the other end placed under the scalp. The fluid drains through this tube, relieving the pressure from the ventricles.

Ventricular subgaleal shunt insertion is thought to be the best method for temporary CSF drainage however in the long term a further permanent procedure may be required to place a tube to drain CSF from the ventricle to the abdomen (ventriculo-peritoneal shunt). This shunt can develop problems in the long term, including becoming blocked or infected, which may require emergency surgery.

Due to the potential for life long dependency on ventricular peritoneal shunting we are keen to find ways of reducing the rate of hydrocephalus following IVH, as such the aim of this study is to see whether washing out the blood from the ventricle reduces the rate of hydrocephalus.

Why has my baby been chosen?

Your baby has been chosen to take part because they have recently been diagnosed with hydrocephalus following intraventricular haemorrhage and they need to have a ventriculo-subgaleal shunt placed.

We are inviting all babies who are undergoing placement of a ventriculo-subgaleal shunt following intraventricular haemorrhage to participate in the research.

Do we have to take part?

If you do not wish your baby to take part in the study you do not need to give a reason and your child will be given the treatment normally used for hydrocephalus following intraventricular haemorrhage.

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You may stop participating in the research at any time that you wish. If you decide to withdraw your child from the study no more information will be collected about him/her. All information collected up to the time of withdrawal will be included in the study analysis unless you request that it is removed.

What will happen to my baby if we join the study?

Because we do not know if Neuroendoscopy is better than the current treatment for hydrocephalus following intraventricular haemorrhage, we need to compare the two. To do this, we will put people taking part in this research into two groups. The groups are selected by chance, as if by tossing a coin.

If your baby is in the Neuroendoscopy group then their treatment will still involve the placement of a ventriculo-subgaleal shunt, but before the shunt is placed a special keyhole camera (neuroendoscope) will be inserted through the same path the shunt will be placed through. Fluid will then be used to break down and remove any clots seen in the ventricles. If there is blood in the ventricles on both sides of the brain, a small hole will be made in a membrane between the ventricles, to allow both sides to be washed out.

We will also take samples of cerebrospinal fluid during the operation, which will be kept for analysis for a maximum of ten years to help understand the damage caused by intraventricular haemorrhage. This fluid would otherwise have been destroyed. The samples will be transferred to the research laboratories within Great Ormond Street Hospital and may be used for analysis for approximately ten years

As part of the routine standard care that we provide at GOSH, your child will undergo an MRI scan when they reach full term and another scan at around 6 months, to monitor brain development. Neonates enrolled in the ENLIVEN study will undergo advanced MRI imaging in addition to the standard scan, again If you do not wish your child to undergo the advanced MRI imaging then please let a member of the team know and they will be removed from this aspect of the study.

If your child should become unwell and there is a clinical suspicion that the shunt may be blocked then a CT scan may be performed at your local hospital. This is part of standard clinical care and no extra CT scans will be performed as a result of being enrolled in the ENLIVEN trial. CT scans use ionising radiation to form images of the body and provide the doctor with clinical information.

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Ionising radiation can cause cell damage that may, after many years or decades, turn cancerous. The chances of this happening to your baby are the same whether you take part in this study or not.

Apart from the potential use of the neuroendoscope to washout the ventricle, all other aspects of your babies treatment will be identical to current standard best practice. Your baby will be followed up at with regular ultrasound scans, just as they would have been had they just had a subgaleal shunt on its own. They will also have regular out patient follow up at six weeks, six months, one year, eighteen months, and at two years. At two years of age a detailed behavioural assessment will be undertaken and this your involvement in the research will be completed.

What if I change my mind

If at any time you choose to withdraw from the study just let a member of the medical team know and your child will be removed from the study. All information obtained up to that point will be used but no further data will be collected.

PART 2

Consent

If you are happy for your baby to take part, and are happy with the explanations given to you by the research team, you will be asked to sign a consent form on behalf of the child before their surgery. You will get a copy of the signed consent form and information sheet to keep.

Randomisation

If you agree to participate in the trial then your child will be randomized to either the standard treatment arm i.e. the insertion of a ventricular subgaleal shunt or the intervention arm i.e. endoscopic clot lavage followed by insertion of ventricular subgaleal shunt. Randomisation will be performed using a sealed envelope system.

What are the alternatives for treatment?

If you do not wish to take part in the research, you will be provided with the established standard treatment available at this hospital. This would typically be the placement of a ventriculo-subgaleal shunt without any endoscopic clot lavage being performed.

What are the risks to my child if they join the study?

By participating in this research it is possible that your baby will be at greater risk than it would otherwise be. There is, for example, a risk that the new treatment doesn't work even as well as the old one.

There are some potential risks you should be aware of, compared to the current treatment (ventriculo-subgaleal shunt alone).

The neuroendoscope, which must be passed through the brain into the ventricles, is slightly wider than the shunt that we normally use. There is risk of damage to the brain, including causing bleeding, when placing the endoscope. The procedure will increase the time spent in surgery by 30-40 minutes. This should have no long term consequences.

A previous study that used a chemical to break down clots found an increased risk of bleeding in babies undergoing treatment. We don’t expect our treatment to have this increased risk as we are not using this chemical, but it is possible that washing out the blood may increase the risk of bleeding too.

Washing out the blood may result in some change in the levels of chemicals called electrolytes in the blood. We will monitor for this carefully and should any abnormalities occur this may require further treatment be given to correct them.

What are the benefits to my child if they join the study?

There is early evidence that endoscopic clot lavage may decrease the chance of needing a permanent shunt. Avoiding the need for a shunt may have many benefits in the long term as shunts can develop blockages and can become infected, requiring further operations and hospital admissions.

There is also early evidence that washing away the blood, and the chemicals that it releases, may reduce the risk of neurological disability caused by the haemorrhage itself.

As such if your child is randomized to the intervention arm there is the chance that they may have a reduced need for permanent shunting and may have an improved neurological outcome

What if there is a problem?

If you have any concerns about any aspect of this study you should speak with the neurosurgical team who can do their best to answer your questions. If you remain unhappy and wish to complain formally, the normal National Health Service complaints mechanisms are also available to you. Details can be obtained from the hospital or the Patient Advisory Liaison Service (PALS), contactable on 020 7829 7862.

Will my child's taking part in this study be kept confidential?

Yes. Only people working on the study or working to ensure the study is run correctly will have access to the data. All information collected about your baby during the study will be confidential and will be handled, stored, and destroyed in accordance with the Data Protection Act 1998. You will be provided with a letter to give to your Baby's GP.

What will happen to CSF and blood samples given by my child?

Samples of CSF and blood will be collected for use in research relating to the study. These will be collected at the time of surgery and will not cause any discomfort. It is planned to take a maximum of 10mls of CSF and 2mls of blood, which would otherwise normally be discarded. The samples will be transferred to the research laboratories within Great Ormond Street Hospital and may be used for analysis for approximately ten years.

What if new information becomes available?

The results of the study will be reviewed every six months by a panel set up specifically to review the progress of the trial. This panel will consist of medical professionals including Neurosurgeons involved in the trial and also a Neonatologist and Intensive care Doctor, and will also lay members

including parents of children affected by GMH. If any new information becomes available about any of the shunts involved in the trial, your child's neurosurgical team will discuss this with you.

What will happen to the results of the study?

We aim to publish the results of this study in medical literature. Yours and your child's confidentiality will be maintained at all times and you will not be identified in any publication.

Who is doing this study?

This study if funded by Great Ormond Street Hospital with support from the Royal College of Surgeons. It is being run by the Neurosurgical team at Great Ormond Street Hospital for Children. This research has been approved by a research ethics committee, who are happy that the study is being conducted in an appropriate manner.

Please ask us if there is anything that is not clear or if you would like more information

Please contact: **Mr Kristian Aquilina**
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0204 059200 Kristian.Aquilina@GOSH.nhs.uk

Or contact: **Mr Greg James**
Department of Neurosurgery – Great Ormond Street Hospital
0204 059200 Greg.James@GOSH.nhs.uk

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Patient's details

Patient's initials: _____ **NHS number :** _____

Date of Birth: ___/___/_____ **Post code:** _____

Randomisation number: _____

A Study of Endoscopic Clot Lavage in Patients with Neonatal Post Haemorrhagic Hydrocephalus

Parent Consent Form
Version 3.0 13/02/2017

	Please initial box
1. I confirm that I have read and understand the information sheet dated 13/02/2017 Version 4.0 for the above study. I have had the opportunity to consider the information, ask questions, and have these answered satisfactorily.	
2. I understand that participation is voluntary and that I am free to withdraw my child at any time, without giving a reason, and without my child's care or legal rights being affected.	
3. I understand that relevant sections of any of my child's medical notes and data collected during the study may be looked at by responsible individuals from the research team, regulatory authorities, sponsor or from the NHS Trust, where it is relevant to my child taking part in this study. I give permission for these individuals to have access to my child's records	
4. I understand that my child's medical data will be collected for this study and may be used in this and in future research	
5. I agree to my child gifting a sample of up to a maximum of 10mls of additional CSF and 2mls of blood for storage at Great Ormond Street Hospital and used in research.	
6. I agree to my child undergoing advanced MRI imaging in addition to the standard MRI scans done at around term and at around 6 months of age.	
7. I agree to medical personnel responsible for my child's welfare being informed of my child's participation in the study when necessary.	
8. I agree to take part in the above study.	
9. Optional : I agree that I may be contacted in the future in relation to this study.	**Yes** **No**

Name of Parent: _____ Signature of parent: _____ Date: _____

Name of clinician:_____ Signature of clinician: _____ Date: ____