CATNAP: The Childhood Ataxia Telangiectasia Neuroimaging Assessment Project

Name of Investigators: Dr RA Dineen, Dr W Whitehouse, Dr G Chow, Dr F Raschke, Prof DP Auer

Study Information Sheet

We would like to invite you to take part in our research study. Before you decide, it is important that you understand why the research is being done and what it would involve for you. One of our team will go through the information sheet with you and answer any questions you have. Please take time to read the following information carefully and discuss it with family members, friends or health professionals if you wish to.

We encourage you to ask us if there is anything that is not clear or if you would like more information. Take time to decide whether or not you wish for to take part. You are welcome to keep this leaflet. Thank you for reading this.

What is the purpose of the study?

Ataxia-telangiectasia (A-T) is a rare inherited condition. Children and young people with A-T develop neurological symptoms such as abnormal movements and difficulties with walking and speech. These neurological symptoms result from irreversible changes in the brain tissue structure called *neurodegeneration* (or ND for short). This particularly involves the back part of the brain – the cerebellum. Although there are treatments for some of the symptoms of A-T, there is no effective treatment for the underlying progressive ND.

State-of-the-art magnetic resonance imaging (MRI) scans can allow us to measure a variety of different biological processes in the brain, and we believe that some of these MRI measures (called *MRI biomarkers*) have the potential to improve our ability to detect and monitor ND in children and young people with A-T. Biomarkers

are very important for the development of A-T treatments because 1) they help us understand the A-T disease process and 2) they allow us to effectively assess whether or not a treatment or drug works.

This study is therefore an important first step towards understanding how potential MRI biomarkers of ND relate to neurological symptoms in A-T. Once completed, this study will allow us to select the most promising MRI biomarkers of ND in A-T to take forward into future MRI and treatment trials.

What does the study involve?

The study involves a single visit to the Queen's Medical Centre in Nottingham. During the visit we would like you to undergo a clinical assessment and an MRI scan. These are explained in more detail below. If possible, the visit will be arranged to coincide with your appointment at the National Children's A-T clinic held at the Queen's Medical Centre in Nottingham.

An MRI scan of your brain will be done during the first part of your visit. During the MRI scan we will gather information about the brain structure and function. This scan is harmless and has no side effects, and will last around 40 minutes. The second part of your visit will be a clinical assessment which consists of a neurological examination and a questionnaire about your quality of life.

At this stage we are asking you to attend for just one visit, and your scan will be compared to scans from other children with and without AT. If this study is successful, we may in the future invite you to come for one or more further scans, so that we can look for brain changes between the initial and later scans. We would also like to archive the scan images so that they can be used for future research studies investigating brain changes in A-T.

Why have I been invited to take part?

This study aims to identify changes on brain scans that relate to neurodegeneration in children and young people with A-T. As you have been diagnosed with A-T we are inviting you to take part. We are also inviting 30 other children and young people with A-T to take part in our study. Additionally we are asking 20 children and young people without A-T to take part.

Do I have to take part?

It is up to you to decide whether or not to take part. If you do decide that you want to take part you will be given this information sheet to keep. You will also be asked to sign a form giving your consent to take part. If you decide to take part you can still withdraw from the study at any time and without giving a reason, if you wish.

Whatever you decide, it will not affect the course of treatment prescribed to you by your doctor.

What do I have to do?

If you are interested in participating, then please contact the CATNAP research team via email (CATNAP@nottingham.ac.uk), or using the reply slip at the end of this leaflet. You will then be contacted by one of the research team members who will briefly check your suitability for the study and will arrange an appointment for you at the Queen's Medical Centre, Nottingham.

On arrival at the Queen's Medical Centre you will be met by one of the research team and taken to the clinic room. The researcher will explain what will happen to you during the visit. You will be asked to sign the consent form, or if you have already signed this you will be asked to confirm that you are still willing to participate.

For the first part of your visit you will be taken to the MRI scanning facility. On arrival at the MRI facility, one of the research team will ask you to complete the MRI scan safety questionnaire. To help to prepare you for the scan, one of the research team members will tell you about the scan and will explain what you will see and hear during the scan. You will be shown around the scanner and scan room, so that you can get used to the environment. After the preparation session, there will be a chance for a break before you return for the proper scan.

The MRI scanner at QMC that will be used for the study

Before you enter the scan room the researcher will check that you have removed all jewellery and loose metal. For the proper MRI scan you will lie on your back in the MRI scanner for a period of around 30 minutes while we acquire the brain scan images. We have soft pads and blankets to help you to get comfortable. While in the scanner you will wear protective earplugs or earphones as MRI scanners can be very noisy. You will be able to contact the MRI technician during the scan via an intercom or with an emergency buzzer at any time.

Your parents/guardians will have the opportunity to be with your during the scan in the scan room if you wish. Our experienced staff will be present at all times and closely monitoring you during the MRI scans.

The second part of the visit will be a clinical assessment for you (or if you have a two day visit to QMC, this may be in the second day). If you are attending for a routine clinic appointment (in addition to taking part in the research project), then this clinical assessment will be incorporated in to your clinic appointment. The clinical

assessment will involve a detailed neurological examination to see exactly how the A-T is affecting you. This assessment will take up to 1 hour. Additionally, you and your parents/guardians will be asked to fill in a questionnaire that will help us to assess your quality of life.

The clinical assessment is the final part of you examination and you can go home afterwards.

What are the benefits of taking part?

There are no direct benefits for you in taking part in the study. However, the study aims to advance our understanding of how an when changes in the brain occur in children and young people with A-T, and how these changes relate to the development of abnormal movements and other neurological features in A-T. We hope this information will be useful in the future for helping to develop and monitor treatments for these problems in children and young people with A-T.

What are the possible disadvantages and risks of taking part?

Provided you do not have a condition which prevents you from having an MRI scan, there are no risks associated with this study. You will be screened for conditions preventing you from having an MRI scan before the scan.

The MRI scanner is a relatively enclosed space and some may feel claustrophobic. During the scan you will be able to speak to the researchers performing the scan.

There is a small chance that your brain scan may show an unsuspected abnormality that is relevant to your health. If a possible abnormality is seen by a member of the research team, we will inform the paediatric neurologists based at the National A-T Clinic at Nottingham University Hospitals NHS Trust (Dr W Whitehouse or Dr G Chow) so that further investigations can be arranged.

What if something goes wrong? Who can I complain to?

In case you have a complaint on you treatment by a member of staff or anything to do with the study, you can initially approach the lead investigator. If this route fails to achieve a satisfactory resolution and you still wish to complain about any aspect of the way that you have been approached or treated during the course of this study, the normal National Health Service complaints mechanisms may be available to you. The Patient Advice and Liaison Service (PALS) can be contacted for further assistance at QMC by calling 0800 1830204

Will my taking part in this study be kept confidential?

Yes. All information which is collected about you during the course of the research will be kept on a password protected database and is **strictly confidential**. The paediatrician involved in your care will be aware of your participation in the study.

What will happen if I do not want to carry on with the study?

Your agreement to participate is voluntary and you are free to withdraw from this study at any time, without giving any reason, and without your legal rights being affected. If you withdraw then the information collected so far cannot be erased and this information may still be used in the project analysis.

Involvement of the General Practitioner/Family doctor (GP)

Your GP will be informed of your participation in this study.

What will happen to any samples you give?

No samples are collected during this study.

Will any genetic tests be done?

We will not be doing any genetic tests as part of this research study. However, we will use the results of any genetic tests that you have had previously that are available from your medical records.

What will happen to the results of the research study?

We will not be able to make the results of individual scans or assessments available to you, but we will be happy to let you know the outcome of the study once the analysis is finished. A tick box has been included on the consent form for you to tick if you would like to be informed of the outcome of the study. It is hoped that the results will be used to guide further research looking at treatment strategies of children with A-T. You will not be identified in any report or publication.

We are already planning follow-on studies looking at how A-T affects the brain over time, and if you choose to participate in the CATNAP study then we would like to seek your permission to contact you in the future for any studies that follow on from the CATNAP study.

Who is organising and funding the research?

The study is being organised by members of the Division of Clinical Neurosciences, University of Nottingham, and the Nottingham Children's Hospital, which is a part of the Nottingham University Hospitals NHS Trust.

The study is jointly funded by a grant from the Ataxia Telangiectasia Children's Project and Action for A-T.

This study is supported by the Ataxia Telangiectasia Society.

Who has reviewed the study?

All research in the NHS is looked at by independent group of people, called a Research Ethics Committee, to protect your interests. This study has been reviewed and given favourable opinion by Derby NHS Research Ethics Committee.

Contact for Further Information

If you would like to discuss the study further or would like more information, please feel free to contact us by email (CATNAP@nottingham.ac.uk) or post:

Dr Rob Dineen
Clinical Associate Professor
Radiological Sciences
University of Nottingham
Queen's Medical Centre
Nottingham
NG7 2UH

General information and useful links regarding participation in clinical research is provided by the People in Research website: http://www.peopleinresearch.org/?o=1192

If you would like to participate, or would like more information, contact the CATNAP team by email (CATNAP@nottingham.ac.uk). Alternatively, please complete and return this form to the address above.

Name: ……

Address: ……

……

……

……

……

Telephone: ……

Email: ……

Please tick box as appropriate:

☐ **I have read the information leaflet and would like to participate in the study. Please contact me to arrange an appointment to visit the hospital.** (if you tick this box you are, of course, free to withdraw from the study at any time.)

I would prefer to be contacted by (please tick one):

☐ **By telephone**

☐ **By email**

If you would like to be contacted by telephone, please state your preferred time to be contacted (delete as appropriate):

Morning / Afternoon / Evening / No Preference

Please detach this form and return it to the address above. Many thanks.