Participant Consent Form

Title: Remote Ischemic Conditioning with Novel Optical Sensor Feedback Device in Acute Ischemic Stroke

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When reading this form, please note that the words "you" or "your" refer to the person in the study rather than to a legally authorized representative who will or might, sign this form on behalf of the person in the study.

Why am I being asked to take part in this research study?

You are being asked to take part in this research study because you have had a stroke. People with stroke may not have full recovery if there are additional changes on the brain imaging like small vessel disease. These changes are seen on head computed tomography (CT) scans or magnetic resonance imaging (MRI) as small or large spots in areas other than that of stroke. We aim to assess a new treatment called remote ischemic conditioning to improve recovery in people with stroke and small vessel disease. The treatment is delivered with the help of a regular blood pressure cuff and a light detector. The study is designed to check if it is reasonable and safe for us to give this type of treatment during hospital stay.

This consent form will tell you what will happen if you take part. It also tells you the possible benefit and risks of being in the study. Taking part in this study is your choice. Please read the information carefully and feel free to ask questions. It may be helpful to discuss this information with your family. You will be given a copy of this form for your records. If you decide to take part in this study, you will be asked to sign the consent form.

What is the reason for doing this study?

In a person with stroke, we initiate measures to prevent future stroke and therapy for recovery from ongoing stroke symptoms. However, if small vessel disease is present on brain imaging, it can hamper the recovery process. Current treatment approaches are the same for people with stroke, whether they have small vessel disease or not. In some studies, remote ischemic

conditioning has been noted to be helpful in reducing the load of these changes on brain imaging by improving the blood flow to these brain parts.

Remote Ischemic Conditioning involves the application of brief sessions of compressions and relaxation on the arm muscles much akin to blood pressure measurement but for 5 min. It leads to a transient safe state of less blood flow in arm muscles which initiates the release of molecules and signals transmitted by blood. These signals may then go on to improve blood flow in the brain.

We have developed a new device, with a light sensor to deliver this treatment in a more reliable manner and with less compression/pressure. This will give feedback to a computer processor and pressure machine to deliver minimal compression. With this study we will find out if we can deliver this therapy in hospitals in a reliable and safe way.

A total of 51 participants will take part in this study. Thirty-four participants will get remote ischemic conditioning therapy and 17 patients will get control therapy. All participants will get standard post-stroke treatment according to national guidelines.

Remote ischemic conditioning treatment with standard blood pressure cuffs has been delivered to many participants for over 15 years in different studies. This device has an additional light detector which has not been used before.

What will happen in this study?

This study has two parts:

1) Screening (to see if you can be part of the study)
2) Delivering Remote Ischemic condition

In the first part our study team member would approach you to discuss your participation in the study. Once we have agreed and all concerns are addressed, we will move onto the second part.

The study team member will complete a case record form with your help and the help of an electronic medical record system. This will contain information about the onset of your symptoms, type of symptoms, brain imaging findings, and physiological and laboratory values. This will take approximately 30 minutes.

Subsequently the study team member will deliver the remote ischemic conditioning therapy with the help of a portable system. They will first put on an arm sleeve on the side which is not affected by stroke or the non-dominant side. Then a standard blood pressure cuff will be placed over the arm sleeve. Therapy consists of 5 min of arm compression and 5 min of relaxation. This will be repeated 5 times. The whole therapy session lasts for 45 min. You can continue with

your hospital activities during the therapy as recommended by the treatment team. Once the therapy is completed you will be requested to give feedback.

Participants in the control part of the study will get similar remote ischemic conditioning therapy with a different pressure protocol for a similar duration.

This therapy session will be repeated once daily for a maximum of 7 consecutive days or till the time you remain in the hospital if you do go home earlier. At the end of the study, we will request for feedback about the therapy sessions. At the last day of intervention, we will again request for information about your well-being, brain imaging findings if performed, and physiological and laboratory parameters.

Three months after being in the study we will call you by telephone to assess your well-being and current state of health. We will ask if you have had any new concerns and how you have recovered from the existing stroke.

There are no additional investigations or procedures required for this study.

What are the risks?

All the sessions will be monitored by the study team member throughout the sessions.

1. Some participants may experience temporary discomfort when pressure is applied with the help of a blood pressure cuff.
2. Some participants may develop temporary redness over areas of pressure in the arm. We will be using a soft arm sleeve to mitigate that sensation or occurrence of redness.

The discomfort sensation is noted to be prominent during the first session and less during subsequent sessions. If previously while checking blood pressure you have noticed persistent discomfort, it will be ideal for you to not consider being in this study. No participants in the previous studies have had persistent redness, discomfort or pain with this treatment.

What are the benefits?

You are not expected to get any benefits from being in this research study.
In experiments, it is shown that remote ischemic conditioning following stroke helps to reduce the extent of brain injury, which will result in an improved outcome. The information that is learned from this study may help us to develop a newer and safer method of delivering ischemic conditioning to stroke patients, and this may potentially benefit stroke patients in the future.

What will I be asked to do while I am in the study?

The study team will approach you daily for the intervention. It will be ideal for you to suggest an appropriate timing to deliver the therapy during working hours.

Do I have to take part in the study?
Being in this study is your choice. If you decide to be in the study, you can change your mind and stop being in the study at any time, and it will in no way affect the care or treatment that you are entitled to.

Can my participation in the study end early?
If during the study period, you develop new symptoms which require transfer to critical care service we will stop the study intervention. Furthermore, at any point if you do not wish to be part of study your participation can end. Once you withdraw from the study, study data will be destroyed. We will approach you with a withdrawal consent form which will ascertain if you would want to be followed by us or not during the reminder of the study period.

What happens if I am injured because of this research?
If you become ill or injured as a result of being in this study, you will receive necessary medical treatment, at no additional cost to you. By signing this consent form, you are not giving up any of your legal rights or releasing the investigator(s), institution and/or sponsor(s) from their legal and professional responsibilities.

What will it cost me to participate?
There will be no costs involved for you.

Will I be paid to be in the research?
No, you will not be paid to be part of the research study.

What data will be collected?
Data about your current state of health and information about laboratory investigations will be collected. We will collect age, date of hospital admission and date of hospital discharge. We will also collect information about brain imaging. During the therapy sessions we will be collecting data about blood flow in the arm. The data will be collected throughout the study period.

How will the study data be stored?
The study data will be stored in paper form and digital form in a desktop computer. The data will be stored in the stroke research office. We will not share study data with non-study team members.

How long will the study data be stored?
The study data will be stored in an anonymized manner for 25 years

How will the study data be used?
The study data will be coded with a study number. We will assess the feedback of the participants. We will also assess the reliability and safety of the therapy.

Who will be able to look at my health data?
The study team will have access to the study data. The University of Alberta auditors, members of Research Ethics Board, and Health Canada may have access to the research study data. By signing this consent form ,you are saying it is alright for the study doctor/staff to collect, use and disclose information from your medical records and your study data as described above.

If you would like to see the study data collected about you, please ask the study doctor. You will be able to look at the study data about you and you can ask for any mistakes to be corrected. The study doctor may not be able to show you your study data right away and you may have to wait until the study is completed or another time in the future before you can see your study data.

What if I have questions?
If you have any questions about the research now or later, or if you experience any adverse effects, or think that you have suffered a research related injury please contact 587-492-6272.

If you have any questions regarding your rights as a research participant, you may contact the Health Research Ethics Board at 780-492-2615. This office is independent of the study investigators.

How do I indicate my agreement to be in this study?

By signing below, you understand:

- That you have read the above information and have had anything that you do not understand explained to you to your satisfaction.
- That you will be taking part in a research study.
- That you may freely leave the research study at any time.
- That you do not waive your legal rights by being in the study
- That the legal and professional obligations of the investigators and involved institutions are not changed by your taking part in this study.

SIGNATURE OF STUDY PARTICIPANT/Substitute Decision Maker

_____
Signature of Participant/ Substitute Decision Maker

_____ _____
Name of Participant/ Substitute Decision Maker Date

SIGNATURE OF STUDY TEAM MEMBER

_____
Signature of Study Team Member

_____ _____
Name of Person Obtaining Consent Date

SIGNATURE OF THE WITNESS

_____
Signature of Witness

_____ _____
Name of Witness Date

A signed copy of this consent form has been given to you to keep for your records and reference.