Version: V1.1

Date: May 11, 2022

Informed Consent Form (For Guardian)

Preliminary Study on Near-Infrared Spectroscopy Monitoring of Tissue Oxygenation Index in Neonatal Catheter-Related Venous Thrombosis

Dear Parent or Legal Guardian:

Your child is being invited to participate in a research study entitled “Preliminary Study on Near-Infrared Spectroscopy Monitoring of Tissue Oxygenation Index in Neonatal Catheter-Related Venous Thrombosis”. Participation is completely voluntary. This form provides you with important information about the study. Please read it carefully before making a decision. If you have any questions, please ask the research doctor, and the study team will answer all your inquiries.

This study is sponsored by the Children’s Hospital, Zhejiang University School of Medicine, and conducted by Dr. Haihong Zhu and her team at the Children’s Hospital, Zhejiang University School of Medicine.

1. What is the background and purpose of this study?

This study investigates changes in tissue oxygenation index (TOI) in limb tissue after catheter-related thrombosis (CRT) and preliminarily explores their correlation. When catheter-related venous thrombosis occurs, near-infrared spectroscopy (NIRS) monitoring of limb tissue oxygenation index can dynamically reflect local venous filling status, which may help guide the monitoring of thrombosis formation and thrombolytic efficacy.

2. What needs to be done before participating?

If you and your child decide to participate, you will be required to sign this informed consent form before any study- related procedures. If a revised version is issued during the study, you will need to sign again.

3. What will happen if your child participates?

Your child will participate and complete the study during hospitalization. A minimum of 50 patients will be enrolled at this study site.

After enrollment, procedures are as follows:

Screening Visit

The study starts after you sign this consent form. A screening visit will first be conducted to confirm whether your child meets all eligibility criteria.

At the end of the screening visit, the research doctor will determine whether your child is eligible to continue. If not, the doctor will explain the reason and discuss alternative treatment options with you.

Follow-up Visits

During the study, your child will undergo the following examinations, steps, or assessments:

1) We will contact you upon admission, inform you in detail about possible thrombotic complications during intravenous infusion, use NIRS to dynamically monitor tissue oxygenation index for early detection and guidance of thrombolysis, confirm thrombolytic effect, maintain catheter function until treatment completion, and reduce discomfort for your child.

2) NIRS monitoring of tissue oxygenation index will include baseline values under normal conditions, bilateral limb comparison, and measurements after thrombosis, during thrombolysis, and after thrombolysis.

3) Assessments of tissue oxygenation index, vascular ultrasound, limb swelling, and pain.

4) Evaluation of catheter-related venous thrombolysis and guidance for clinical management.

4. What are the potential risks and discomforts, and what safeguards are in place?

Taking a medical history may cause mild psychological discomfort during communication. We will respect your feelings and protect your privacy to the fullest extent.

5. Are there alternative treatments available besides this study?

Alternative standard care includes diagnosing thrombosis and evaluating thrombolytic effect based on ultrasound results and clinical symptoms.

6. What are the potential benefits of participating?

This study uses non- invasive, real- time, continuous NIRS monitoring to reflect local venous filling status. Especially when bedside ultrasound is unavailable or limited by operator experience, NIRS- derived tissue oxygenation index can help judge thrombosis formation and thrombolytic effect. Data from this study may improve understanding of neonatal catheter- related venous thrombosis and benefit future patients.

7. What if your child is harmed as a result of participation?

If your child experiences injury or adverse events during the study, please contact the research doctor immediately for timely treatment. For harm causally related to this study, the Children’s Hospital, Zhejiang University School of Medicine will cover medical

expenses and provide appropriate financial compensation in accordance with applicable national laws and regulations.

Signing this form does not waive any of your legal rights.

8. Is participation mandatory?

No. Participation is voluntary. You may decline enrollment or withdraw your child at any time without penalty, discrimination, or retaliation. Withdrawal will not affect your child's future medical care and rights.

If you wish to withdraw, please notify us. We will ensure your child completes the study in the safest manner.

Your child may be withdrawn without your consent in the following situations:

- You or your child fail to follow the study team's instructions.

- The research doctor determines the study is no longer in your child's best interest.

- The study is terminated by the sponsor, Institutional Review Board (IRB), Independent Ethics Committee (IEC), or regulatory authority.

9. What happens if new information becomes available?

During the study, we will promptly inform you of any meaningful new findings or medical information relevant to your child's health, including recommendations for additional tests if needed.

Based on new information, your doctor may recommend withdrawal and explain the reason, then discuss optimal treatment options.

10. What costs will I be responsible for?

Routine examinations and treatments according to the preterm infant follow- up schedule during the study are at your own expense.

11. Will I receive compensation for participation?

No compensation will be provided for participation in this study.

12. How will my child's privacy be protected?

All personal and health information will be protected to the fullest extent permitted by law. No personal identifiers will be disclosed in any public report of study results. Research records may be accessed by investigators, the Ethics Committee of the Children's Hospital, Zhejiang University School of Medicine, hospital authorities, and government or regulatory bodies.

All study- related documents will be identified by a code only. No reports or publications will reveal your child's identity.

Identifiers linking data to privacy information will be stored securely at the Children's Hospital, Zhejiang University School of Medicine. Research data will be retained for 3 years.

13. Who should I contact for questions about my child's rights or the study?

You may ask questions at any time before, during, or after the study. The team will answer all inquiries until you are satisfied.

Contact for the study team:

Nurse Name: Zhu Haihong

Phone: 13606508192

For questions about your child's rights as a research participant, or to communicate with someone not directly involved in the study, contact:

Ethics Committee: Medical Ethics Committee, Children's Hospital, Zhejiang University School of Medicine

Address: No. 3333 Binsheng Road, Binjiang District, Hangzhou, Zhejiang Province

Tel: 0571- 86670076

Informed Consent Signature Page

I have read and understood the information in this consent form. I have had the opportunity to ask questions and am satisfied with all answers. I have been given sufficient time to review details and consider participation. I voluntarily consent for my child to take part in this study. Signing this form does not waive any of my legal rights.

I have been informed I will receive a signed copy of this document.

Child's Full Name (Printed) Li Zeping

Parent/Legal Guardian Full Name (Printed) Li Pengfei

Parent/Legal Guardian Signature

Date

Contact Phone

Investigator Statement

I confirm that I have explained the study in detail to the subject's guardian, including rights, potential benefits, and risks, and provided a signed copy of the consent form.

Investigator Full Name (Printed) Zhu Haihong

Investigator Signature

Date

Contact Phone 13606508192

Consent for Illiterate Parent/Legal Guardian

If the parent/legal guardian is illiterate, a member of the study team will read and discuss this form with them and allow time for questions.

Impartial Witness Full Name (Printed)

Impartial Witness Signature

Date

Contact Phone

☐ Not applicable (Check if no impartial witness is needed. A witness is required if the subject or legal guardian is illiterate.)

Impartial Witness: A person independent of this study, free from undue influence, who witnesses the consent process, reads the consent form aloud, and confirms understanding when the subject or legal guardian cannot read.