

## Informed Consent

### Informed Page

**Name of Project:** Effect of balanced opioid-free anaesthesia on postoperative nausea and vomiting after video-assisted thoracoscopic lung resection

**Source of project:** The Science and Technology Development Plan Clinical Trial Project (SLT201909) and Jiangsu Provincial Medical Youth Talents Program (QNRC2016741).

**Project research organization:** Department of Anaesthesiology, First Affiliated Hospital of Soochow University, Suzhou, Jiangsu, China; Institute of Anaesthesiology, Soochow University, Suzhou, Jiangsu, China.

**Research leader:** Ke Peng

Dear Mr/Mrs,

You will be invited to participate in a clinical study. The following item describes the research background, purpose, research methods, benefits, possible discomfort, inconvenience, your rights, and your interests in the course of this study. Please read them carefully before attending the clinical study. This informed consent may help you decide whether to participate in this clinical study or not. You can ask questions to ensure you fully understand the content. If you agree to participate in the clinical study, please sign it on the signature page of the informed consent form.

## Research introduction

### I. Research background

Postoperative nausea and vomiting (PONV) is one of the most common adverse reactions after general anesthesia and surgery. Although various antiemetic drugs have been continuously developed, the incidence can be as high as 60-80% in surgical patients. The main risk factors for PONV include opioid use, women, non-smoking and previous motion sickness or history of PONV. Opioids have been widely used in clinical pain management, but its adverse reactions include nausea and vomiting, respiratory

depression, hyperalgesia, and impaired gastrointestinal motility. In recent years, the new concept of opioid anesthesia has emerged. In this study, we aim to evaluate the effects of OFA on PONV and postoperative pain in patients undergoing thoracoscopic pulmonary surgery.

## **II. Study name and purposes**

The name of this study is: Balanced opioid-free anaesthesia for patients undergoing video-assisted thoracoscopic lung resection: protocol for a randomised controlled trial. The primary outcome of this trial is the incidence of PONV within 48 hours after surgery.

## **III. Research methods and content**

By using the randomization method, we will assign you to one of the opioid-based or opioid-free groups. The two groups adopt different anesthesia induction and maintenance methods, and we will evaluate and analyze the medical information data that you have generated during your routine clinical anesthesia and postoperative recovery process. We will follow you up and ask you about the postoperative nausea, vomiting, pain and other related questions within 48h after the surgery.

The researcher began to arrange for the relevant examination and research operations. These examination and study operations will help to determine if you are fit to participate in this study. This stage is the "pre-study phase". If the investigator determines that you have not met the enrollment criteria, you will not be allowed to participate in the study. The investigator will advise you to follow the routine anesthesia protocol. After you understand the whole study and have had your questions satisfactorily answered, you will need to sign this informed consent form if you wish to participate in this study.

## **IV. Research process and time limit**

The entire study is expected to be completed within 1 year, and the total number of planned enrolled subjects is 120 (60 of each group). The study process consists of the screening period and the follow-up period. You will complete this study at approximately 90 days after surgery, without any other ancillary examinations.

## **V. Possible benefits of participating in the research**

Your participation in this study may help you to reduce the occurrence and severity of postoperative nausea and vomiting, and you will be carefully evaluated, monitored, and treated. At the same time, we hope to learn more about the impact of OFA on postoperative pain management through the information obtained from the institute. Based on these, we could accumulate experience for anesthesia management of future surgical patients and provide new ways and ideas for improving PONV.

#### **VI. Possible risks and discomfort of participating in the study**

You will receive general anesthesia in this study. Although general anesthesia has a good safety profile, the following risks may still occur perioperatively: (1) respiratory depression, respiratory tract obstruction, aspiration, asphyxia or aspiration pneumonia, and respiratory failure; (2) arrhythmia, hypotension, hypertension, and heart failure; (3) tooth loss, hoarseness, laryngeal edema, postoperative pain, nausea, vomiting, agitation, delayed awakening or intraoperative awareness; (4) high sensitivity or allergy, infusion and blood transfusion reactions; (5) electrolyte and acid-base balance disorder, hemorrhagic shock; (6) central and peripheral nerve injury, postoperative headache, and pulmonary complications. The safety of the anesthesia process is monitored by the attending anesthesiologist. Anesthesiologists are fully responsible for the detection and treatment of patients during the perioperative period according to the rules and regulations, operation routine and diagnosis and treatment norms. Before anesthesia, we will explain to the patients and their family members about the possible problems perioperatively. We will prepare and observe carefully and deal with any problem in time. In case of a life-threatening situation, we will ensure full rescue, and ask the patient and his family members to understand and support. The above content is detailed in the Informed Consent in the medical record, and will be signed by the patient or the authorized client.

The esketamine and other anesthetic drugs in this study are routinely used in clinical practice, so they will not increase the risks beyond the routine treatment. The anesthetics and other drugs (esketamine, sufentanil, propofol, cisatracurium, dexamethasone, sevoflurane) may induce adverse reactions, for which the treatment measures are as follows: (1) adverse effects of esketamine include dizziness, drowsiness,

gastrointestinal discomfort, increased blood pressure, increased heart rate and other adverse reactions. Benzodiazepines can effectively reduce the relevant discomfort symptoms; (2) adverse effects of sufentanil include respiratory depression, apnea, hypotension, bradycardia, nausea and vomiting. Supplementary oxygen administration, maintaining hemodynamic stability, antiemetic and other symptomatic treatment can reduce these adverse effects; (3) adverse effects of propofol include hypotension, injection pain, respiratory depression. Supplementary oxygen administration and intravenous lidocaine can reduce related adverse reactions of propofol; (4) adverse reactions of cisatracurium include delayed muscle strength recovery, rash and other adverse reactions. The use of antagonist of muscle relaxants can improve the recovery of muscle strength in patients; (5) adverse effects of dexamethasone include elevated blood glucose, which can be managed with glucose monitoring and insulin treatment if necessary.

For the common adverse effects that may occur during anesthesia, treatments are as follows: hypotension (SBP <90 mmHg or MAP reduction exceeds 30% above base value), intravenous ephedrine 6mg; Severe bradycardia (HR <45 bpm), intravenous atropine 0.3mg; Hypertension (systolic blood pressure >140mmHg or MAP increased by 30% above the base value) and tachycardia (HR> 100 bpm), uradil 5mg or esmolol 20mg was injected based on the depth of anesthesia and adequate analgesia; Hypoxemia (SpO<sub>2</sub> <90%), mask compression to assist in breathing, blood gas analysis was performed and symptomatic treatment was performed. PONV rescue treatment plan: if the patient occurs postoperative nausea and vomiting, ondansetron, haloperidol, metoclopramide and other treatments will be given according to the situation. Postoperative pain relief treatment plan: if the patient request or VAS score is greater than 3 or equal to 4, flurbiprofen axetil 50mg intravenous infusion, which can be repeated within 24 hours if necessary. If you have any discomfort, or new changes in your illness during the study, whether drug-related or not, timely notify your doctor, he / she will make a judgment and medical treatment, and will do anything possible to prevent and treat the risks and discomfort due to this study.

In addition, if someone other than the researcher has obtained your relevant health

information, it may cause employment, insurance, or trouble for your family. To reduce these risks, we will keep your personal information confidential under relevant regulations. In case of serious adverse reactions related to the study, we will immediately take the corresponding treatment measures, inform the ethics committee, and provide economic compensation in accordance with Chinese laws and regulations.

#### **VII. Treatment and financial compensation for study-related injuries**

If the participant suffers any injury related to the study and is determined by the authority stipulated by the national laws and regulations, the funding and institution will cover the relevant treatment expenses and the corresponding economic compensation according to the relevant laws and regulations of China.

#### **VIII. Routine diagnosis and treatment plan outside of this study**

In addition to participating in this study, you can take a routine opioid anesthesia induction and maintenance management protocol.

#### **IX. Rights of the subjects**

This study will not cause additional harm to your physical and psychologic status or social relationships, and will not affect the diagnosis and treatment of your disease. The whole study process is subject to the supervision of the ethics committee of our hospital. You can consult the study doctor with any questions during the study. Your participation in the trial is entirely voluntary, and you can withdraw informed consent at any time. Your personal data and observation records are confidential for this study only. During the trial, you can contact the study physician and research team members during the trial or consultation.

#### **X. Confidentiality of clinical research data**

The investigator is responsible for following the applicable data protection regulations to handle your research data. However, the information is accessible to the ethics committee and higher administrative departments. The results may be published in medical journals or conferences, but your identity will not be disclosed.

After signing this informed consent, you will give your consent to the research doctor and the research center staff to collect your health information data. Your authorization for us to use your health information remains valid until the study ends

and until the results are available. However, you can always withdraw your informed consent from the responsible physician through the study.

#### **XI. Collection and management of biological samples involving people**

The investigator declare that this study does not involve the collection and management of biological samples from the subjects.

#### **XII. Contact information**

All members of the research group will answer all of your questions before you sign this consent form. If you still have questions, suggestions, or comments after signing the consent form, you can communicate with the investigator. You can keep information about and progress of this study.

**Researchers and contact information:** Ke Peng, 15962155989, pengke0422@163.com

**Ethics Committee contact person and contact information:** Shuangjie Wu, 0512-67972743

#### **XIII. Statement and Signing**

Subject statement: I have read this informed consent form carefully; I have the opportunity to ask questions and all questions have been answered. I understand that participation in this study is voluntary, so I can refuse participating in this study, or withdraw from the study at any time without discrimination or retaliation, and my medical treatment and interests will not be affected.

If I need other treatment, have any other reasonable reason, or fail to comply with the study plan, the study doctor may terminate my continued participation in this clinical study.

I voluntarily agree to participate in this clinical study and I will receive a signed copy of the "informed consent form".

**Subject Name (regular script)** \_\_\_\_\_

**Subject Signature:** \_\_\_\_\_ **Mobile phone number:** \_\_\_\_\_

**Date:** \_\_\_\_\_

**Name of legal agent (regular script)** \_\_\_\_\_

**Signature of the legal agent:** \_\_\_\_\_ **Mobile phone number:** \_\_\_\_\_

**Relationship with the subjects:** \_\_\_\_\_

**Date:** \_\_\_\_\_

Reasons why the subjects could not sign the informed consent form: \_\_\_\_\_

The Investigator has stated that I have accurately informed the subject of the informed consent form and answered the questions, and the subject has volunteered to participate in this clinical study.

**Name of investigator** \_\_\_\_\_ **signature:** \_\_\_\_\_

**Mobile phone number:** \_\_\_\_\_

**Date** \_\_\_\_\_