

Informed Consent Form for the Use of Esketamine at the Affiliated Hospital of Sichuan Vocational College of Nursing (Sichuan Third People's Hospital)

Patient Name: _____ Sex: _____ Age: _____

ID Number: _____

Contact Information: _____ Diagnosis: _____

Proposed Procedure: _____

To the Patient and Family Members:

In accordance with the *Regulations on the Administration of Medical Institutions* and relevant laws and regulations, the following information regarding esketamine is provided to ensure that you are fully informed and able to make an autonomous decision regarding your treatment. Please read this informed consent document carefully before signing.

I. Pharmacological Mechanism

Esketamine, the S-enantiomer of ketamine, exerts its therapeutic effects primarily through the following mechanisms:

1. NMDA Receptor Antagonism: Non-competitive blockade of N-methyl-D-aspartate (NMDA) receptors inhibits glutamate-mediated neuroexcitation, producing anesthetic, analgesic, and antidepressant effects.
2. Multi-target Modulation: Interactions with opioid receptors (μ , δ), monoaminergic receptors (5-HT, DA), and brain-derived neurotrophic factor (BDNF) enhance analgesia and modulate affective states.

II. Pharmacokinetics

1. Absorption and Distribution: Intravenous administration achieves peak plasma concentrations within 1–2 minutes. High lipophilicity facilitates rapid blood–brain barrier penetration.
2. Metabolism and Excretion: Hepatic metabolism via cytochrome P450 enzymes CYP3A4 and CYP2B6; primary metabolites are excreted renally. The elimination half-life is approximately 2–3 hours, with substantial interindividual variability.
3. Route of Administration: Intravenous injection, intramuscular injection, or intranasal spray. Intravenous administration is commonly employed in clinical practice (induction: 0.5–1.0 mg/kg; maintenance: 5–20 $\mu\text{g/kg/min}$).

III. Clinical Applications

1. Anesthetic Induction and Maintenance: Indicated for general anesthesia induction and brief surgical procedures. The agent provides concomitant analgesia and reduces opioid consumption.
2. Acute and Chronic Pain Management: Effective for postoperative analgesia, cancer-related pain, and neuropathic pain, with reduction of hyperalgesia.
3. Psychiatric Treatment: Subanesthetic doses facilitate rapid-onset treatment of treatment-resistant depression and post-traumatic stress disorder, with therapeutic effects observed within 2 hours.
4. Special Populations: Hemodynamic stability is preserved during induction in elderly patients. For geriatric anesthesia induction, the initial dose should not exceed 0.2 mg/kg, and continuous intravenous infusion should not exceed 0.5 $\text{mg}\cdot\text{kg}^{-1}\cdot\text{h}^{-1}$.

IV. Risks and Potential Benefits

Risks:

1. Common Adverse Effects: Dizziness, nausea, vomiting, elevated blood pressure, tachycardia, and increased salivation.
2. Psychiatric Symptoms: Dose-dependent hallucinations, nightmares, delirium, and dissociative phenomena. Postoperative monitoring until full recovery of consciousness is required.
3. Serious Risks: Rare instances of anaphylaxis and cardiovascular events (hypertensive crisis, arrhythmias). Caution is warranted in patients with hepatic or renal impairment.
4. Long-term Risks: Potential for abuse, addiction, or cognitive impairment. Use is restricted to medical indications only.

Benefits:

1. Rapid analgesic and anesthetic effects, with reduction in perioperative opioid-related complications (respiratory depression, nausea, and vomiting).
2. Rapid antidepressant response, offering a novel therapeutic avenue for treatment-resistant depression.
3. Minimal hemodynamic perturbation, rendering it suitable for anesthetic induction in elderly patients.

V. Precautions

1. Contraindications: Severe cardiovascular disease, intracranial hypertension, history of epilepsy, and known drug hypersensitivity.
2. Special Populations: Pregnant and lactating women, pediatric patients, and individuals with hepatic or renal impairment require cautious administration under close medical supervision.
3. Post-procedure Requirements: For 24 hours following administration, the patient must refrain from driving, operating machinery, engaging in hazardous activities, and consuming alcohol. A responsible adult must accompany the patient.

VI. Physician–Patient Communication and Informed Consent

1. The attending physician will evaluate the necessity of esketamine administration based on your medical condition, allergy history, and medication history, with continuous monitoring of vital signs throughout the procedure.
2. You retain the right to decline esketamine therapy. The medical team will provide alternative treatment options and discuss their respective risks and benefits.
3. Should severe adverse effects occur during treatment, the physician reserves the right to discontinue administration immediately and institute appropriate medical intervention.

Patient/Family Declaration:

I have read and understood the information provided above. I am aware of the indications, risks, and alternatives to esketamine therapy. I voluntarily consent to receive this treatment and authorize the medical team to perform the relevant procedures. I have had the opportunity to discuss any questions with my physician.

Patient (or Legal Representative) Signature: _____ Date: _____

Guardian Signature (if applicable): _____

Date: _____

Attending Physician Signature: _____

Date: _____