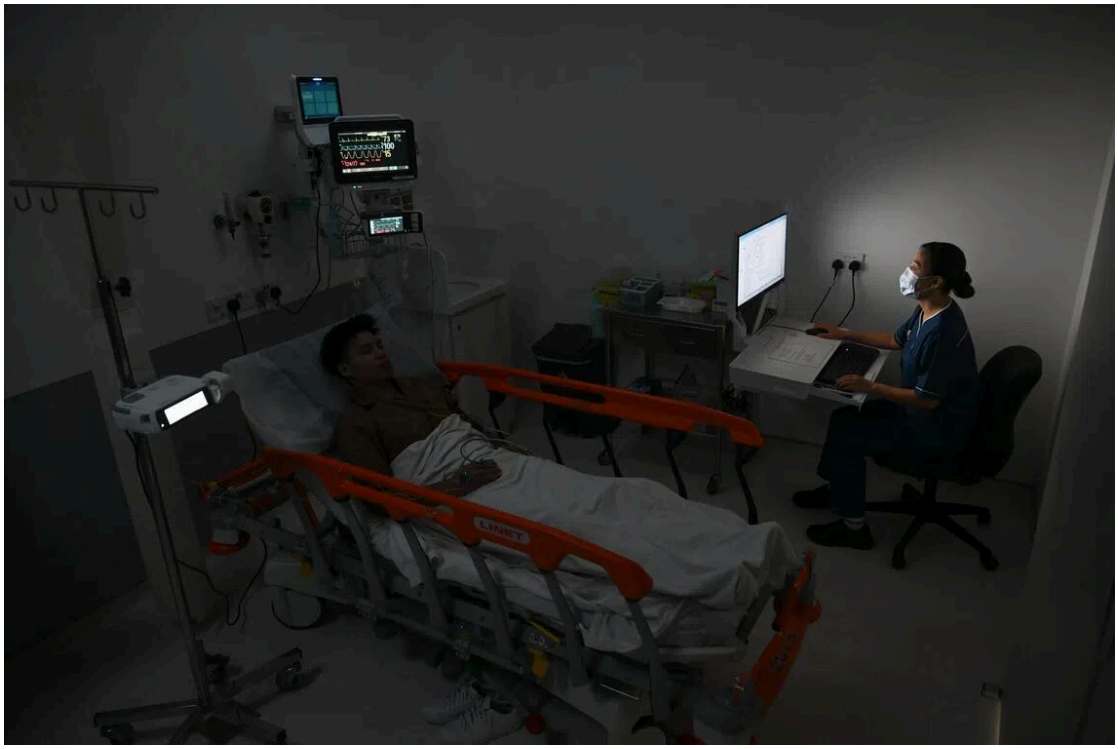
Ketamine therapy at IMH offers hope to patients with hard-to-treat depression



Ketamine, widely known as a party drug, has increasingly been harnessed as a treatment for depression. ST PHOTO: SHINTARO TAY

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Summarise

SINGAPORE - Joseph Lim, 31, was rushed to the Institute of Mental Health (IMH) after a suicide attempt in September 2024.

He was trapped in a cycle of severe depression.

A new treatment – an intravenous form of ketamine – provided a breakthrough where conventional treatments had failed.

Ketamine is widely known as a recreational party drug that induces a trance-like state of dissociation, but it is also an anaesthetic agent that in recent years has increasingly been harnessed as a treatment for depression, particularly for treatment-resistant depression (TRD).

Standard antidepressants include selective serotonin reuptake inhibitors, which target the mood regulator serotonin, correcting its shortage over several weeks typically.

Ketamine, however, targets a specific type of glutamate receptor, stimulating growth and repair of brain cell connections and allowing the brain to "reset" and adapt more positive thought patterns.

Along with some other alternatives, ketamine could be used for a substantial pool of people with major depressive disorder, or MDD, for whom standard treatments do not work well.

There are no local studies on the prevalence of TRD, but globally, it is estimated to affect at least about 30 per cent of the people diagnosed with MDD, which is characterised by a persistently sad or empty mood and a total loss of interest in activities.

Goh Shih Ee, a consultant psychiatrist and head of the neurostimulation service at IMH, said multiple clinical trials have shown that ketamine has rapid antidepressant effects at lower, sub-anaesthetic doses. These are doses that are too low to induce general anaesthesia but high enough to achieve medical benefits.

"The response can be pretty fast. It has been described even in hours to days, and this is quite different from our traditional antidepressant medications, because those usually take four to six weeks to have their effects," Goh said.

He added: "We also see that in our local population, the response can come in sooner, so this could be as soon as (after) two to three sessions."

IMH rolled out intravenous ketamine as a standard service in August 2025, after a year-long pilot involving five patients, including Lim.

The treatment involves placing a small intravenous line in the arm to deliver controlled sub-anaesthetic doses of ketamine directly into the bloodstream over 40 minutes. It works faster than an oral route as the entire dose goes straight to the brain.

Out of 13 patients treated with intravenous ketamine at IMH between late 2024 and mid-2026, over half of them responded to the treatment with improvements in their mood, energy levels and a reduction in the severity, frequency or intensity of suicidal thoughts, intent or behaviours. This outcome is on a par with the response rates of 35.7 per cent to 68 per cent reported in published studies, said Goh, who had gone for a six-month training stint in Britain to prepare for the service.

He was speaking to the media ahead of the July 15 to 17 Biennial International Congress on Mental Health, an event that brings together clinicians, researchers, policymakers and advocates from across the region and beyond to discuss advancements in treatments for mood and anxiety disorders.

At IMH, the intravenous ketamine treatment is primarily delivered on an outpatient basis. A typical course of acute treatment comprises eight sessions, with two treatments per week. Patients who improve with the acute treatment may require tapering or maintenance treatments subsequently, Goh said.

“It could be from once a week to once every four weeks, depending on how the individual patient sustains on the treatment,” he said.

Lim was diagnosed with TRD because he did not see improvement after trying at least two different antidepressant medications.

Apart from medication, many TRD patients try electroconvulsive therapy or ECT, where small amounts of electric current are passed through their brain to induce a brief, therapeutic seizure.

Others undergo numerous sessions of transcranial magnetic stimulation or TMS, which uses magnetic pulses to stimulate underactive brain regions involved in mood regulation.

ECT is the most effective treatment option for severe depression, with a response rate of about 60 per cent to 80 per cent, but patients have to undergo general anaesthesia for the treatment and there is a risk of memory impairment, Goh said.

TMS, meanwhile, has a response rate of about 20 per cent to over 40 per cent.

Goh Shih Ee, a consultant in the department of mood and anxiety at the Institute of Mental Health, demonstrating the administration of intravenous ketamine on a mock patient on July 1. ST PHOTO: SHINTARO TAY

Before Lim tried intravenous ketamine, he had done 24 sessions of ECT. However, he said the effects of ECT wore off after the 15th session, and his suicidal thoughts returned.

With intravenous ketamine, his mood is better, and he is more energetic than before. He has done 52 sessions over the past two years and experienced some dissociative effects such as visual sensations of seeing stars, but they did not last long after the treatment.

Clearly noticeable improvements in his mood kicked in from the fifth session.

“The next morning (after the treatment) when I woke up, I felt very fresh and I could brush my suicidal thoughts aside, and not be tempted to act on them,” Lim said.

“For the first time in five years, I felt that my self-esteem issues were not bothering me and I could go back to work.”

Lim, who lives with his parents and a younger sister, is now searching for a job.

He is glad that intravenous ketamine became a subsidised treatment. By then, he had been hospitalised at least 10 times at IMH.

“I want to tell the people with MDD that there is always hope,” he said.

“We don’t choose to be depressed. It’s an unseen condition. I hope the public and employers can be more understanding of when we are on a recovery path. Maybe one day I can stop (the condition).”

Ketamine is also available as a nasal spray for use together with other oral antidepressant therapy for the treatment of depression. ST PHOTO: SHINTARO TAY

Singapore General Hospital is another institution here offering the intravenous ketamine service.

Ketamine is also available as a nasal spray, which was approved in October 2020 by the Health Sciences Authority, for use together with other oral antidepressant therapy for the treatment of depression. This is sold under the brand name Spravato and has been available at IMH since 2021.

While both treatments offer quick symptom relief, the intravenous version allows doctors to adjust the dose more easily, and it does not have the side effect of altered taste that Spravato carries, Goh said.

While there is still a low potential risk for addiction with ketamine interventions, this is mitigated as the clinical doses are lower than those used recreationally, given at clinically indicated intervals and in a monitored setting in hospital, he said.

Ketamine, he said, is meant for a group of patients who have already had multiple trials on medications or alternative therapies. “Hence, they are referred to us to consider this (and) other interventions like ECT and TMS,” he said.

Goh added that the prescription of ketamine is done only by selected psychiatrists who have undergone specific training.

Helplines

Mental well-being

- National Mindline: 1771 (24 hours) / 6669-1771 (via WhatsApp)
- Samaritans of Singapore: 1-767 (24 hours) / 9151-1767 (24 hours CareText via WhatsApp)
- Singapore Association for Mental Health: 1800-283-7019
- Silver Ribbon Singapore: 6386-1928
- Chat, Centre of Excellence for Youth Mental Health: 6493-6500/1
- Women’s Helpline (Aware): 1800-777-5555 (weekdays, 10am to 6pm)
- The Seniors Helpline: 1800-555-5555 (weekdays, 9am to 5pm)
- Tinkle Friend (for primary school-age children): 1800-2744-788

Counselling

- Touchline (Counselling): 1800-377-2252
- Touch Care Line (for caregivers): 6804-6555
- Counselling and Care Centre: 6536-6366
- We Care Community Services: 3165-8017
- Shan You Counselling Centre: 6741-9293
- Clarity Singapore: 6757-7990
- Care Corner Counselling Centre: 6353-1180

Online resources

- mindline.sg/fsmh
- eC2.sg
- chat.mentalhealth.sg
- carey.carecorner.org.sg (for those aged 13 to 25)
- limitless.sg/talk (for those aged 12 to 25)

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