

Department of Pharmacy

Ketamine for pain

Introduction

This leaflet provides information on a medicine called ketamine when it is used to treat pain that is difficult to control. After reading this leaflet you should know about what to expect if you start taking ketamine, for example, how to take it, how well it works, and what side-effects you may experience. If you have any questions please ask your doctor.

What is ketamine?

Ketamine is a medicine that was first used as an anaesthetic; to help put people to sleep before an operation. It has also been used (in much lower doses) to help ease certain types of severe pain such as neuropathic (nerve) pain, bone pain, or pain related to burns. It is usually prescribed when other types of pain killers such as opioids (e.g. morphine) have not worked. It may be prescribed by itself, or in combination with other pain killers.

Although ketamine is not licensed to treat pain it has been used for many years to treat pain and doctors who specialise in pain control have a lot of experience using this medicine.

Ketamine is available as an oral liquid, and as an injection that can be given under the skin. Your doctor will help to decide which one is right for you.

How does ketamine work?

Ketamine works mainly by blocking the action of a certain chemical in the spinal cord (N-methyl-D-aspartate) that send messages to the brain that tells it you are feeling pain.

When is ketamine usually prescribed?

Ketamine is usually prescribed when other pain killers such as opioids have not worked. It is always started by a doctor who specialises in treating pain (usually in the hospital). Your doctor will ask you to come into hospital to stay overnight for the first few days of treatment. This is in order for your doctor to find the right dose of medicine for you and to monitor your response to treatment. When you are discharged you will need to get a supply of this medicine from the hospital pharmacy.

Once you are stabilised on this treatment your doctor at the hospital may ask your GP to continue prescribing it. If your GP writes a prescription for this medicine you can take it to your local pharmacy. Your pharmacist can order in a supply of ketamine, but it usually takes three to four days for this medicine to come in, once it has been ordered.

What dose of ketamine is usually prescribed?

You will need to come into hospital for the first few days of treatment until you are stabilised. Your doctor will usually start off by prescribing a low dose of ketamine and then slowly increase it. This is because like any medicine ketamine has a number of side-effects. Starting off with a low dose and slowly increasing it allows your body to get used to these effects. It also allows your doctor to see how well your symptoms are responding to ketamine.

If you are taking the oral liquid the starting dose is usually 10 mg four times a day. This may be increased to a maximum of 100 mg four times a day.

If you have been prescribed the subcutaneous injection the usual starting dose is 50 mg over 24 hours (via a small infusion pump). The usual maximum dose is 500 mg given over 24 hours.

How much ketamine you will need depends upon how well it is working for you and if you are having any side-effects.

What should I do if I miss a dose?

If you miss a dose try to take it as soon as you remember. However if it is almost time for your next usual dose, wait until then to take your medicine and skip the missed dose.

Never double up the dose to make up for a missed dose.

How well or quickly does ketamine work?

For some people ketamine can work very quickly (within a few hours). For other people it may take a few weeks of taking the maximum dose of ketamine before their pain will improve. It is not possible to tell who will respond quickly to ketamine.

Can I take other medicines if I take ketamine?

In general, ketamine should not affect your other medicines. When you start ketamine you will be staying in hospital and your doctor or pharmacist will make sure that you are not given ketamine with other medicines that may not be suitable.

Other painkillers such as weak opioids (e.g. codeine), non steroidal anti-inflammatory drugs (NSAIDs) such as ibuprofen, or paracetamol can be taken at the same time as ketamine.

If you are already taking a strong opioid such as morphine, and you are started on ketamine your doctor will usually reduce the dose of your morphine. This is because you may not need the same amount of strong opioid while taking ketamine.

Before you take or buy any new medicines always tell your doctor or pharmacist that you are taking ketamine.

What is the length of treatment?

The length of treatment will depend on why you were started on ketamine and how well it works.

Ketamine can continue to work for pain even after it has been stopped. For example once your pain is under control for a few weeks your doctor may decide to slowly stop the treatment.

Is ketamine addictive?

It is very rare for someone who is taking ketamine for pain relief to become addicted to ketamine. However it is sometimes taken illegally in large doses and drug abusers can become addicted to it.

If you need to stop taking ketamine it should be stopped slowly by your doctor. This is because stopping it suddenly can result in severe rebound pain. This is when pain comes back quickly and can be severe.

What are the possible side-effects?

It is not possible to list all the side-effects of ketamine here, please ask your doctor. As with all medicines ketamine has a number of side-effects. The most common side-effects include vivid dreams, hallucinations (feeling, seeing or hearing something that is not actually there), dysphoria (feeling unwell or unhappy), and sedation (tired or sleepy). These symptoms can also be signs that your dose of ketamine is too high.

Less commonly reported side-effects include an increase in blood pressure, and a fast heart rate.

Rarely, ketamine can affect how well your liver works. Your doctor will monitor your liver function with blood tests. For the vast majority of people, their liver function returns to normal once ketamine has been stopped.

More recently there have been reports of ketamine causing problems with the urinary tract (the tube that passes urine out of your body). These problems include pain passing water, blood in the urine, and needing to pass urine more often. Please contact your GP or your specialist pain nurse or doctor if you experience any of these symptoms.

Do I need to have any tests when taking ketamine?

While you are taking ketamine you will need to have regular blood tests to monitor your liver and you will also need to have your blood pressure taken regularly.

In addition you will also be monitored for problems with your urinary tract. Your doctor or nurse will ask you if you have any problem such as stinging when you pass water, if you are passing water more often than normal and if you have any blood in the urine.

These tests are usually done once a month when you are at home, and more often when you start treatment in the hospital.

Can I drink alcohol if I am taking ketamine?

If possible, you should avoid drinking alcohol if you are taking ketamine. This is because alcohol may increase some of the side-effects of ketamine. In some circumstances it will be ok to have a small drink but please discuss this with your doctor.

Can I drive if I am taking ketamine?

Taking ketamine does not automatically mean that you cannot drive. People who take the same amount of ketamine every day for pain are usually fit to drive.

When you first start taking ketamine or when your dose is increased you may feel drowsy. You should use common sense and not drive if you feel drowsy.

Note: Your doctor may have told you that you are fit to drive, but remember it is your responsibility to decide whether you are fit to drive on each occasion.

Who cannot take ketamine?

Normally you should not take ketamine if you have:

- Raised pressure within the skull (your doctor will know if this is the case).
- Severe high blood pressure.
- Raised pressure inside the eye (glaucoma).
- Recent history of epilepsy.
- Recent history of psychosis.

Contact details

For further information

- **Medicines information patient helpline:**
Tel: 0191 2823016. Available from 9:00am to 4:00pm, Monday to Friday (excluding bank holidays). This helpline is available for patients of the Newcastle Upon Tyne Hospitals, to answer any questions they may have regarding their medicines
- The Patient Advice and Liaison Service (PALS) can offer on-the-spot advice and information about the NHS. You can contact them on freephone 0800 032 02 02 or e-mail northoftynepals@nhct.nhs.uk

Useful websites

If you would like further information about health conditions and treatment options, you may wish to have a look at the NHS Choices website at www.nhs.uk. On this website there is an information prescription generator www.nhs.uk/ips which brings together a wealth of approved patient information from the NHS and charity partners which you may find helpful

References:

1. The Palliative Care Formulary: Ketamine BNF Chapter 15.1.1 (2013)
2. Blonk M. et al. Use of oral ketamine in chronic pain management: A review. *European Journal of pain*. 2009.

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