

Clinical Guideline for the use of Oral Ketamine: Royal Sussex County Hospital only

Summary

This document provides guidance on the dosing and administration of low-dose ketamine for adult inpatients with uncontrolled acute post-operative pain.

Introduction

The aim of acute pain management is not only to relieve immediate pain, but to prevent the development of chronic and persistent pain. Most patients post-operatively respond to typical analgesia (such as opioids). However, there are a cohort of patients who do not respond to opioids or whom managing pain with opioids are best avoided. Ketamine is an anaesthetic agent, but in low doses can be effective as an analgesic without inducing anaesthesia.

Scope

This document describes the indications for using oral ketamine for adult inpatients with complex or acute post-operative pain. It explains how ketamine suspension can be administered by nursing staff on the surgical wards.

Oral ketamine for acute pain should only be commenced, prescribed, titrated and discontinued by the Anaesthetic or Pain Service. This guideline does not cover the administration of ketamine as an anaesthetic agent or for the relief of procedural pain in areas such as Accident and Emergency. It does not cover the use of ketamine in palliative care.

Indication

Patients should have at least one of the following criteria for ketamine to be considered:

- Suspected neuropathic pain, including phantom limb pain
- Patient with suspected hyperalgesia or allodynia
- Patients who have responded poorly to opioids
- Patients with a history of taking opioids preceding injury or surgery
- Patients who are expected to have severe post op pain where an opioid sparing technique is preferable

Ketamine may also be considered as an alternative to prescribing opioids in the first instance. These include:

- Trauma patients
- 'Complex' patients predicted to have severe post-operative pain.

Preparation

Oral Ketamine is available as a 'specials' oral suspension (50mg in 5mL).

Storage Requirements

Ketamine is as a Schedule 2 controlled drug. Therefore, it is subject to safe custody requirements. It must be stored in the controlled drug cupboard and requires a two person signature for administration. See trust policy for safe and secure handling of medicines for more information.

Dosing

Dosing typically starts at 20mg 4 hourly then is titrated according to response as per the table below. Maximum daily dose in 24 hours is 450mg

Dose (mg)	Volume (mL)	Frequency	Total 24 hour dose (mg)
20	2	4 hourly	120
30	3	4 hourly	180
40	4	4 hourly	240
50	5	4 hourly	300
60	6	4 hourly	360
70	7	4 hourly	420

Contra-indications

- Allergy to ketamine
- Previous history of ketamine abuse
- Pregnancy
- Eclampsia/pre-eclampsia
- Schizophreniform psychosis
- Severe coronary/myocardial disease
- Cerebrovascular accident/trauma

Caution

- Acute intoxication
- Acute porphyrias
- Seizure history
- Hyperthyroidism/patients receiving thyroid replacement (increased risk of hypertension and tachycardia)
- Hypertension

Hepatic failure

Ketamine is metabolised by the liver and hepatic clearance is required to terminate its effect. A prolonged duration of action may occur in patients with cirrhosis or other types of liver impairment. Dose reductions should be considered in these patients. On the rare occasions that this happens dosing advice should be sought from the pain service on an individual patient basis.

Renal Impairment

Although Ketamine can be used without adjustment for patients with renal impairment; these patients are likely to have had opioids in attempts to manage their pain. Therefore there may be a risk of increased sedation or opioid toxicity when Ketamine is commenced; patients should be appropriately monitored.

Monitoring

The administration of oral ketamine suspension does not require any additional monitoring of the patient's vital signs.

Discontinuation

Ketamine should be discontinued prior to the patient's discharge from hospital and alternative analgesia should be prescribed, if required.

Ketamine can be stopped abruptly, but in practice is normally stepped down gradually. It is not an addictive medication when given for acute pain relief and does not cause physical or mental problems upon cessation.

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