

The Use of Subcutaneous Levetiracetam in Palliative Medicine

Indications for use	The treatment of epileptic seizures and status epilepticus in palliative care patients who are unable to take their medications orally and when IV access is not possible or not desired.		
Preparations	Keppra® 100 mg/ml concentrate for solution for infusion. Each 5 ml vial contains 500 mg of levetiracetam. This preparation is not licensed for subcutaneous administration.		
Dose conversion from oral to subcutaneous (SC)	A 1:1 ratio between oral and subcutaneous routes should be used. Therefore, the initial dose by subcutaneous (SC) infusion should be the same as previously administered total daily dosage taken orally.		
Doses	The usual starting dose is 500-1000mg over 24 hours via a CSCI. Dose escalation schedules may vary depending on the clinical condition the patient. The maximum licensed dose is 3000mg in 24 hours. Higher doses have been used. Please contact pharmacy for advise.		
Rate of Infusion	Levetiracetam should be infused via CSCI over 24 hours. However, depending on the volume, two 12 hour drivers may be required.		
Hepatic Impairment	No dose adjustment is needed in patients with mild to moderate hepatic impairment. In patients with severe hepatic impairment, the creatinine clearance may underestimate the renal insufficiency. Therefore a 50 % reduction of the daily maintenance dose is recommended when the creatinine clearance is < 60 ml/min/1.73 m ²		
Renal Impairment	Group	Creatinine clearance (ml/min/1.73m ²)	Dose and frequency
	Normal	> 80	500 to 1,500 mg twice daily
	Mild	50-79	500 to 1,000 mg twice daily
	Moderate	30-49	250 to 750 mg twice daily
	Severe	< 30	250 to 500 mg twice daily
	End-stage renal disease undergoing dialysis ⁽¹⁾	-	500 to 1,000 mg once daily ⁽²⁾
	⁽¹⁾ A 750 mg loading dose is recommended on the first day of treatment with levetiracetam.		
	⁽²⁾ Following dialysis, a 250 to 500 mg supplemental dose is recommended.		
Diluents	Sodium Chloride 0.9% or Water for Injection (WFI) can also be used. Levetiracetam solution for injection should be diluted as much as is practical to avoid irritation at the site of administration.		
Compatibility Information	Levetiracetam should not be mixed in a syringe with other medications as there is insufficient information at present regarding compatibility		
Cautions	The administration of levetiracetam to patients with renal impairment may require dose adjustment.		
Drug Interactions	There are few known drug interactions between levetiracetam and other medications. Please contact pharmacy for advice.		
Issues for Use in the Community	Keppra® 100mg/ml concentration for solution for infusion is not currently reimbursable on the General Medical Services (GMS) card or the Drugs Payment Scheme (DPS) card. Therefore, the patient may have to incur the cost of the medicine.		