

Lidocaine: this local anaesthetic agent has been found to be helpful when used topically but also as an intravenous infusion. A recent paper in the journal *Pain* ([\[1\]](#)) noted that

"continual systemic infusion of lidocaine prevents or reverses the development of neuropathic pain following chronic constriction injury".

A recent UK study ([\[2\]](#)) looking at the effects of a 5% lidocaine patch in moderate to severe neuropathic pain (as measured on the Neuropathic Pain Scale) found that the patch "reduces the intensity of all common neuropathic pain qualities".

Mexiletine:

Mexiletine is a local anaesthetic that has been used to treat heart rhythm disorders.

Unlike externally used local anesthetics, mexiletine only appears to affect the painful nerves and thus neither numbs nor desensitizes the patient. It is sometimes used to treat diabetic neuropathy.

In 1997, The Mexiletine Study Group conducted a study on the safety and efficacy of mexiletine. ([\[3\]](#))

They found

“A significant reduction in sleep disturbances and pain during night time was observed in the group of patients taking the highest dosage (675 mg/day) of mexiletine compared with the other groups.”

They concluded that

“Mexiletine in a dosage of 675 mg daily can reduce pain caused by diabetic neuropathy, and the effect of this drug appears to have a rapid onset.”

No serious adverse effects were seen. Mexiletine has now become widely used to combat cancer-related neuropathic pain. Mexiletine is the preferred drug as it has a favourable side-effect profile ( [\[4\]](#) )

It may be considered as a second-line agent in treating refractory neuropathic pain.(of any origin). It could be used if, say, an antidepressant or anticonvulsant drug fails to be effective.

The starting dose should be low, at 100- 150mg/day and be increased gradually until effective or side-effects become troublesome. (max. dose 900mg/day i.e. 300 mg tds.). ECG readings should be monitored during dose escalation and plasma levels should be measured at higher doses.

ADRs: generally well tolerated. Adverse effects may include gastrointestinal distress, dizziness or light-headedness, tremor, and coordination difficulties. Mexiletine may worsen pre-existing cardiac arrhythmias and is contraindicated in patients with pre-existing second- or third-degree atrioventricular blockade.

Tocainide is one of the other alternatives. It has been found to be useful in treating trigeminal neuralgia.( [\[5\]](#) )

[1] Smith LJ, Shih A, Miletic G, Miletic V. *Pain* 2002 Jun; 97(3):267-73 Continual systemic infusion of lidocaine provides analgesia in an animal model of neuropathic pain.

[2] Galer BS, Jensen MP, Ma T, Davies PS, Rowbotham MC. *Clin J Pain* 2002 Sep-Oct; 18(5):297-301 The lidocaine patch 5% effectively treats all neuropathic pain qualities: results of a randomized, double-blind, vehicle-controlled, 3-week efficacy study with use of the neuropathic pain scale.

[3] Oskarsson P Ljunggren J-G Lins P-E, *Diabetes Care* VOLUME 20 NUMBER 10 - Page 1594 Efficacy and Safety of Mexiletine in the Treatment of Painful Diabetic Neuropathy

[4] Kreeger W, Hammill SC *Mayo Clin Proc* 1987; 62:1033-1050 New antiarrhythmic drugs: tocainide, mexiletine, flecainide, encainide and amiodarone.

[5] Linstrom P, Lindblom U *Pain* 1987; 28:45-50 The analgesic effect of tocainide in trigeminal neuralgia.