

### Sodium valproate (Divalproex)

Authors such as Loscher ( [\[i\]](#) ) have reported the use of valproate in treating neuropathic pain. I am also aware of its use in centres in Australia, at a dose of 200mg three times a day increasing to 500mg three times a day, apparently with a good degree of success.

However, Wiffen et al, in the Cochrane Report on

"Anticonvulsant drugs for acute and chronic pain"( [\[ii\]](#) ), stated "The only placebo-controlled study in acute pain found no analgesic effect of sodium valproate."

### Lamotrigine: (Lamictal)

Lamotrigine is a second generation AED. In 1996, Canavero et al ( [\[iii\]](#) ) reported beneficial effects of lamotrigine in 4 patients who suffered from central neuropathic pain.

In 1997, Harbison et al ( [\[iv\]](#) ) reported success in treating 3 patients with phantom limb pain and stump hypersensitivity, Post-herpetic neuralgia (PHN) and causalgia respectively.

In 1998, at the Eighth Annual Neuroscience of HIV Infection meeting in Chicago, the results of a small study of patients treated for HIV related peripheral neuropathy with lamotrigine were presented.

Although this was a small study, there was a significant difference between the test group and the control group who received placebo. Some patients reported pain relief within 2 weeks of starting treatment with lamotrigine. ( [\[v\]](#) )

This randomised, controlled trial was sufficiently encouraging to warrant further studies.

In 1998, di Vadi and Hamann ( [\[vi\]](#) ) published an article on the use of lamotrigine in treating neuropathic pain in just 2 patients and again suggested that "this novel channel antagonist can be used to treat neuropathic pain. Double blind placebo control studies are therefore needed to substantiate these findings."

In October 1999, McCleane ( [\[vii\]](#) ) published the results of a randomised, double-blind, placebo controlled trial involving 74 patients. He did not find any therapeutic effect at doses up to 200mg/day for an 8 week period of treatment.

#### Topiramate (Topamax)

In 1998, at the American Academy of Neurology 50<sup>th</sup> Annual Meeting, Dr. Keith Edwards, a Neurology Consultant from Vermont, presented a small study of 14 patients who were treated for refractory neuropathic pain with topiramate.

After being treated for 3 months, the patients reported significant reduction in pain. The average dose of topiramate was 270 mg/day (range 100-800mg/day). The dose was increased or decreased in 25-50mg increments as necessary and the first report of pain relief came at a dose of 214mg/day.

As Dr. Edwards stated, these results suggest that further randomised controlled trials should be undertaken to confirm these results. ( [\[viii\]](#) )

## Zonisamide (Zonegran)

This sulfonamide anticonvulsant was approved by the FDA in March 2000. It is used in various epileptic conditions, but is also currently being studied at the University of Wisconsin to determine its possible application in treating neuropathic pain.

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[\[i\]](#) Loscher W

*Prog Neurobiol*

1999 May;58(1)

Valproate: a reappraisal of its pharmacodynamic properties and mechanisms of action.

[\[ii\]](#) Wiffen P, McQuay H, Carroll D, Jadad A, Moore A

*Cochrane Database*

Anticonvulsant drugs for acute and chronic pain.

[\[iii\]](#) Canavero S, Bonicalzi V *Pain* 1996 Nov;68(1):179-181 Lamotrigine control of central pain

[\[iv\]](#) Harbison J, Dennehy F, Keating D *Ir Med J* 1997 Mar;90(2):56 Lamotrigine for pain with hyperalgesia

[\[v\]](#) Source: "Pain Weekly" Internet site "Early data suggest possible role for drug in treatment of peripheral neuropathy.

[vi] di Vadi PP, Hamann W

*Anaesthesia*

[vii] McCleane G *Pain* Oct1999;83(1):105-107 200mg daily of lamotrigine has no analgesic effect in neuropathic pain: a randomised, double-blind , placebo controlled trial.

[viii] Taken from NeuroNet Medi-View Express Report from Data Presented at the American Academy of neurology 50<sup>th</sup> Annual Meeting (held April25- May 2, 1998 in Minneapolis, Minnesota) internet site.