

#### 458 LIDOCAINE 5% MEDICATED PLASTER USE FOR POST-SURGICAL CRPS TYPE 2

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**Introduction:** After orthopedic surgery, nerve lesions may lead to neuropathic pain: some patients develop a Complex Regional Pain Syndrome (CRPS) type 2. When CRPS occurs after a surgery of a distal joint, patients often present a localized neuropathic pain. The current guidelines recommend the use of topical lidocaine as a first-line treatment for the management of localized neuropathic pain.

**Objectives:** Our purpose is to present our use of a lidocaine 5% medicated plaster (licensed in France for post-herpetic pain) in the management of CRPS.

**Methods:** The cases of 20 patients with CRPS 2 who used the 5% lidocaine plaster were reviewed in a retrospective study. Patients were screened with the DN4 questionnaire.

**Results:** The mean age of our patients was 53 years (range 24–71) with a ratio of 1:4 men to women. CRPS type 2 occurred after surgery of the knee (9 patients, 45%), the ankle (4, 20%), the elbow (1, 5%), the wrist (4, 20%) and the fingers (2, 10%). Allodynia was found in 11 patients (55%). Associated treatments were tricyclic antidepressants (20%), gabapentinoids (35%) and TENS (85%). After one month of use, 18 patients (90%) had pain relief of 30% and more, 11 (55%) of 50% and more with the plaster. Two patients reported no relief. The mean duration of treatment was 8 months (range 1–15). There were no reports of serious adverse events.

**Conclusion:** The lidocaine 5% medicated plaster appears to be useful and safety in the management of the neuropathic component of CRPS 2.

#### 459 ADJUVANT ACUPUNCTURE TREATMENT IMPROVES NEUROPATHIC PAIN (NP) IN PERIPHERAL NEUROPATHY (PN) AND INDUCES NEURONAL REGENERATION

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**Introduction:** In spite of available efficient drug treatment for NP in PN alternative treatment strategies are desirable, because a notable number of patients report side effects and there are almost no therapeutic options for neuronal regeneration.

**Objectives:** We conducted a pilot study to evaluate the effect of acupuncture on NP and neuronal regeneration as measured by subjective parameters and Nerve Conduction Studies (NCS).

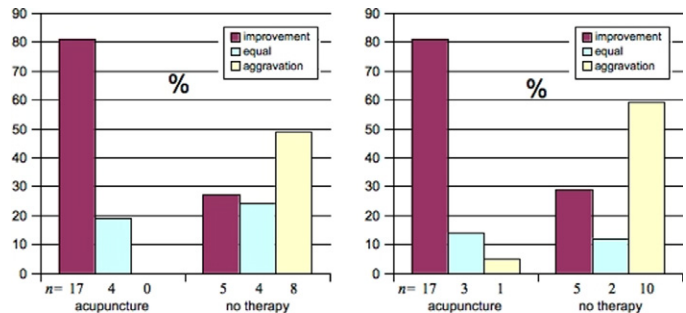
**Methods:** 192 patients with PN of an outpatient clinic were retrospectively evaluated over a period of one year. Follow up data of NCS had to be available. 38 patients suffered from NP, medical drugs on a stable dose for one month before and during the observation period were accepted. 21 patients got 10 adjuvant acupuncture treatments on a weekly basis, while 17 control patients got no additional therapy.

**Results:** The comparison of the mean individual changes of NCS during the observation period is shown in table 1.

Table 1: Mean individual change of NCS

	Acupuncture (n = 21)	Control (n = 17)	Difference	Unpaired t-test
Sural nerve amplitude (µV)	1.381±1.457	0.059±2.142	1.322	p=0.0301
Sural nerve conduction (m/s)	9.024±16.412	-1.529±7.916	10.553	p=0.0203
Tibial nerve amplitude (mV)	1.738±2.354	-0.588±1.523	2.326	p=0.0012
Tibial nerve conduction (m/s)	0.833±3.568	-0.588±1.406	1.421	n.s.

Subjective outcome is shown in figure 1 ( $X^2 = 4.3$ ,  $df = 2$ ,  $p = 0.001$ ) and outcome assessed by NCS is shown in figure 2 ( $X^2 = 13.8$ ,  $df = 2$ ,  $p = 0.001$ ).



Left: Neuropathic pain – subjective results. Right: Outcome assessed by NCS.

**Conclusions:** The data suggest that acupuncture offers an additional option for the treatment of NP in PN. Improvement of NCS are considered to be signs of neural regeneration, increased blood flow to the vasa nervorum and dependant capillaries may contribute to nerve repair. Acupuncture might induce a long term therapeutic effect on NP in PN without side effects. Further randomized controlled trials are necessary.

#### 460 PROGRESS TOWARDS A PHASE 1/2 TRIAL OF HSV-MEDIATED GENE TRANSFER OF GAD IN PATIENTS WITH PAINFUL DIABETIC NEUROPATHY

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**Introduction:** The development of novel effective treatments for chronic pain has been disappointingly slow. In part this is because the conservative use of a limited repertoire of neurotransmitters, receptors and ion channels at multiple sites and in many converging and diverging pathways serving different functions in the nervous system that limits the ability to use systemically administered small molecules to selectively interrupt nociceptive neurotransmission.

**Objectives:** To overcome this limitation we have constructed a series of non-replicating herpes simplex virus (HSV)-based vectors that delivered by inoculation in to the skin efficiently target gene delivery to dorsal root ganglia neurons to effect the release of antinociceptive neurotransmitters from afferent DRG terminals in a regionally restricted manner in the dorsal horn of spinal cord.

**Methods:** We constructed a replication defective HSV vector vG to express GAD67. In animal studies we found that subcutaneous inoculation of the vector resulted in a substantial and significant reduction in pain-related behaviors in rodent models of traumatic (spinal nerve ligation) and diabetic neuropathic pain.

**Results:** A clinical trial of HSV-mediated transfer of pre-proenkephalin in patients with cancer pain is underway. A proposal to test the effect of vG in patients with painful diabetic neuropathy has been reviewed by the Recombinant DNA Advisory Committee of the NIH and construction and validation of the human-grade GAD-expressing HSV vector is underway.

**Conclusions:** HSV-mediated gene transfer may provide an additional approach to treat patients with otherwise untreatable neuropathic pain.

#### 461 RETEROSPECTIVE CASE STUDY SERIES: INTRAVENOUS LIDOCAINE INFUSION FOR PELVIC NEUROPATHIC PAIN MANAGEMENT

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**Introduction:** Lidocaine has been shown to reduce pain scores for painful diabetic neuropathy along with mexiletine in painful