

# PREDICTING THE RESPONSE TO 5% LIDOCAINE MEDICATED PLASTER IN TRIGEMINAL NEURALGIA AND PAINFUL TRIGEMINAL NEUROPATHY. A CASE SERIES

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## INTRODUCTION

Trigeminal neuralgia (TN) is characterized by sudden, unilateral, severe, brief, stabbing, recurrent electric shock-like episodes of pain lasting seconds to less than 2 minutes in the distribution of one or more branches of the trigeminal nerve. TN may be classified in classical (i.e. idiopathic cases and those with potential vascular conflict with the trigeminal nerve) and symptomatic TN. Carbamazepine (CBZ) is the drug of first choice in TN and has a number needed to treat to obtain consistent pain relief of 2 or less, but side effects are common, resulting in a number needed to harm of 3. Drugs used for TN include other anticonvulsants, baclofen, pimozide, and tocainide. Patients who are refractory to drugs may undergo surgical procedures, which have frequent complications, including sensory loss in the trigeminal nerve territory, and anesthesia dolorosa or corneal numbness, which carries a risk of keratitis. Trigeminal neuropathic pain (TNP) is common in patients undergoing lesions of trigeminal nerve or its branches and is frequently difficult to treat with drugs and surgical procedures. The quality of life (QoL) of patients with TN and TNP is often poor because of refractory pain, its effect on sleep, or the side effects of treatments. 5% lidocaine medicated plaster/patch (LMP) is a treatment of first choice for localized neuropathic pain, but its efficacy in TN and TNP has not been explored to date, except in case reports or very small case series. Here we report on a group of patients with TN or TNP, who were treated with LMP.

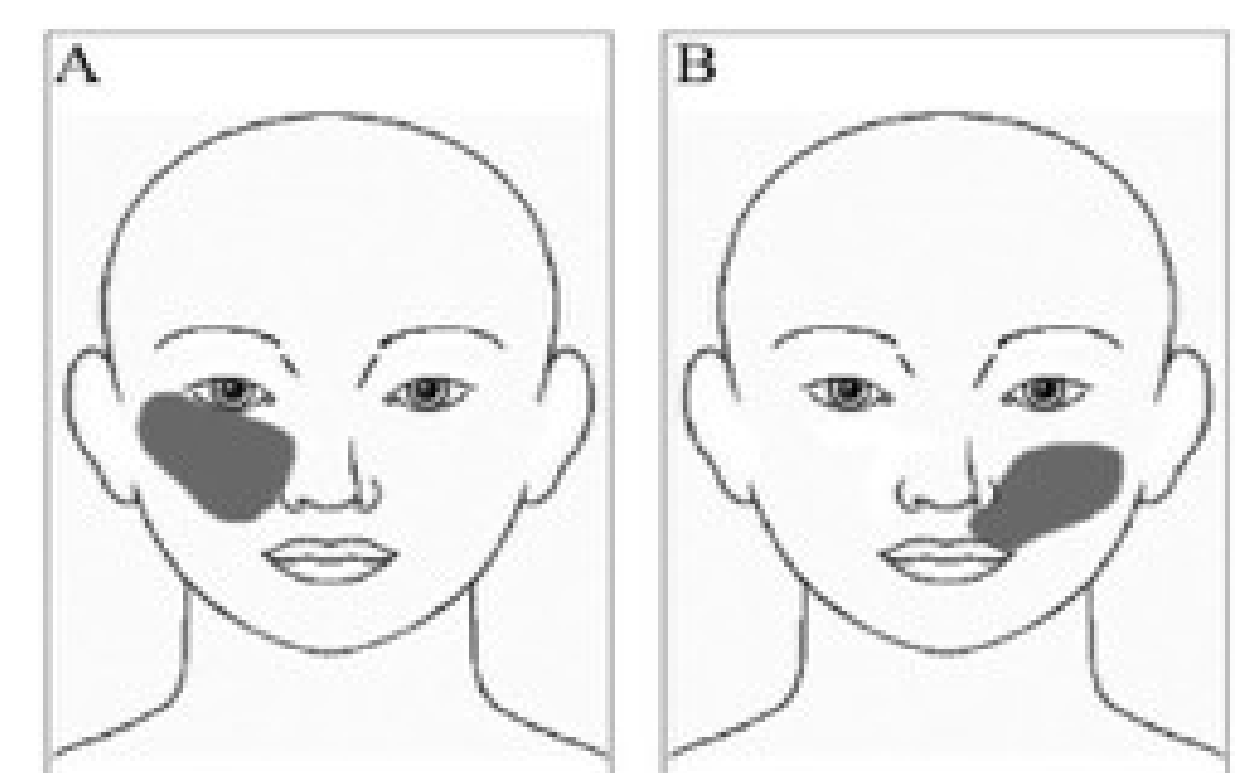
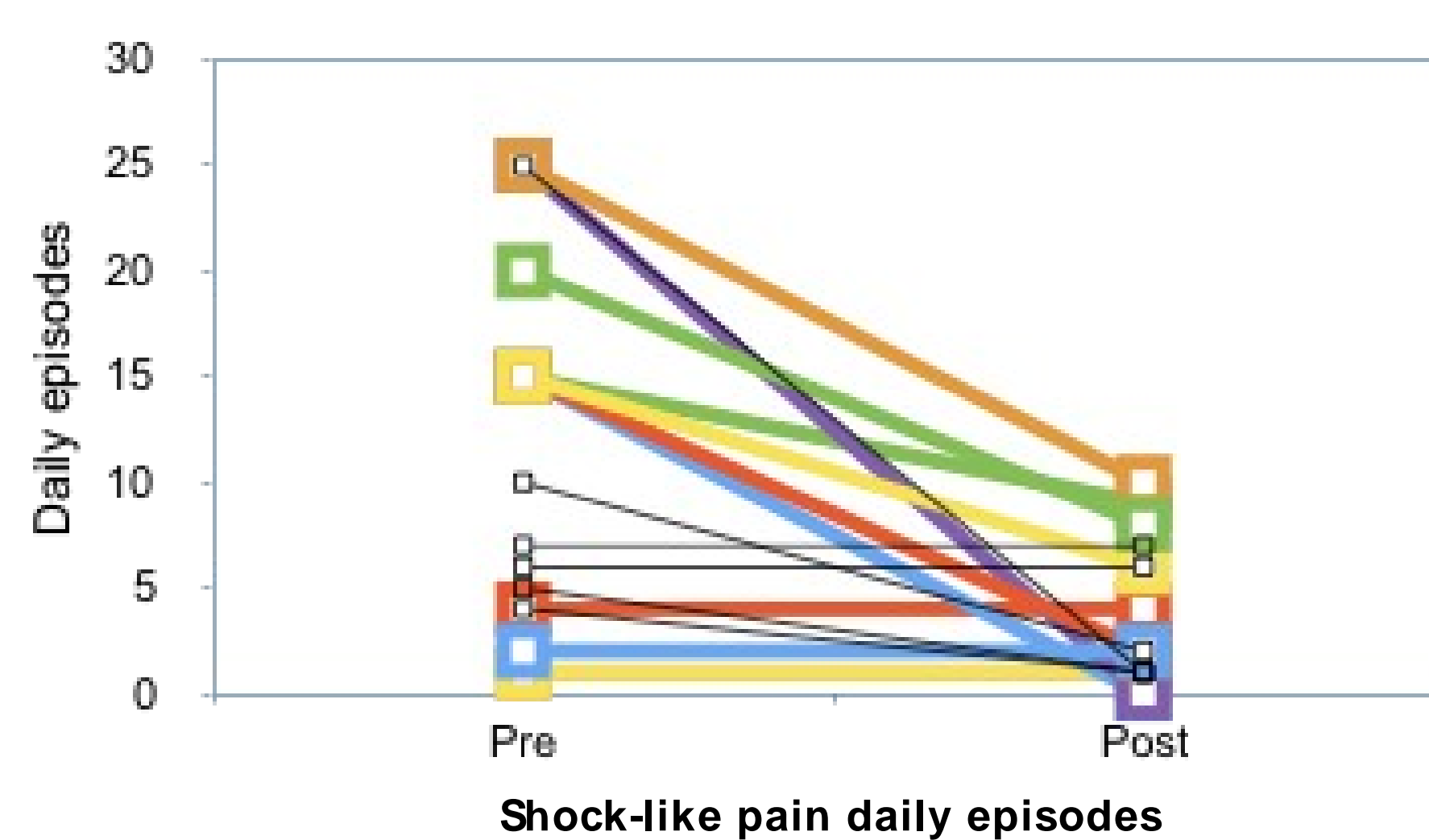
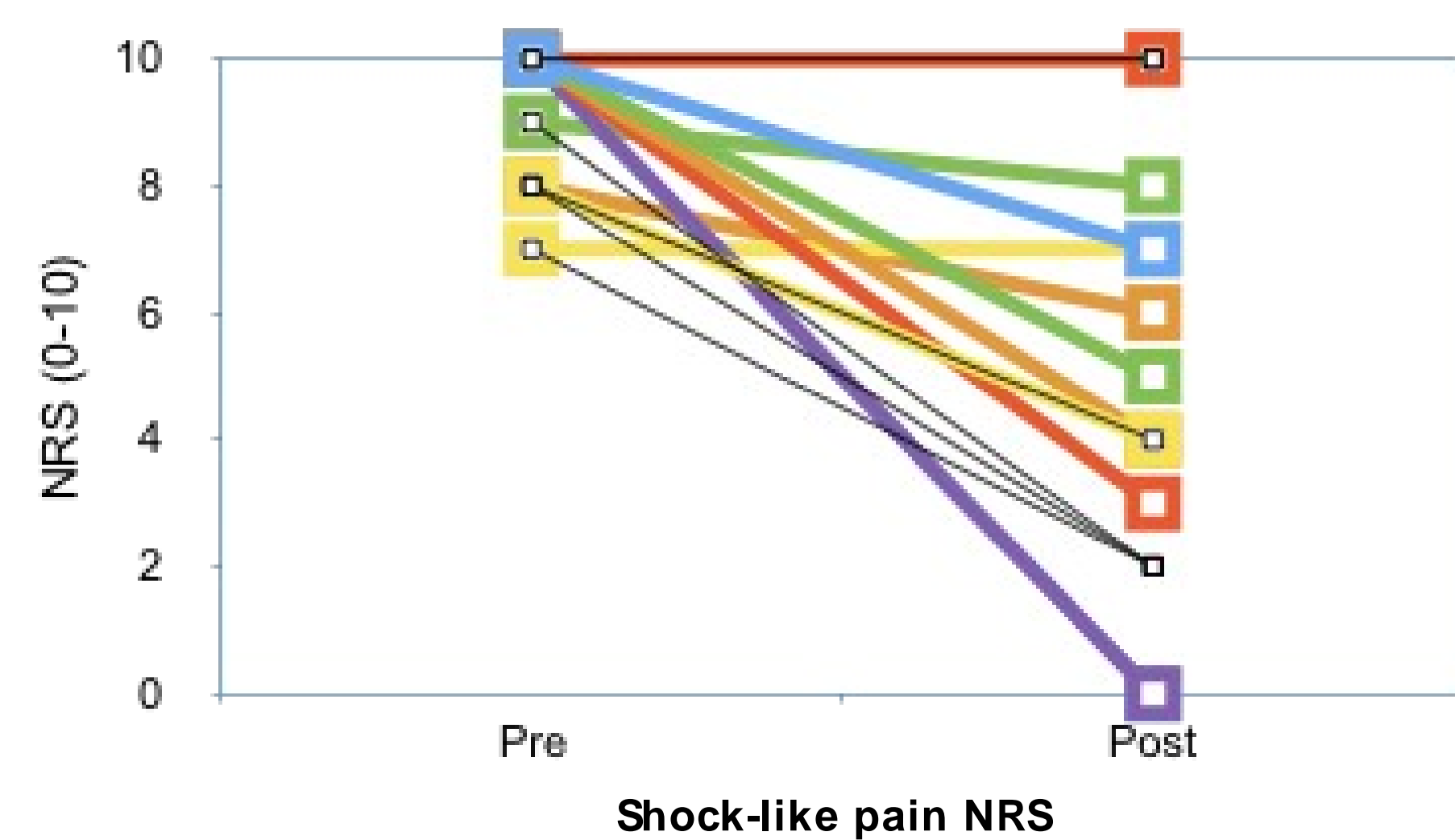
## SUBJECTS AND METHODS

**Inclusion criteria.** Diagnosis of primary or secondary TN or TNP; poor pain response or side effects to current pharmacological treatment or contraindications or refusal to invasive treatments; no contraindications to LMP.

**Outcome measures.** Reduction of pain and of the daily shock-like pain episodes (responders = 50% reduction of both outcome measures).

No.	Age	Sex	Trigeminal pain type	Side	Trigeminal branch	Pain duration <sup>§</sup>	Continuous pain (0-10 NRS)	Shock-like pain		Hypaesthesia			LMP Treatment			
								(0-10 NRS)	(episodes/day)	Tactile	Punctate	Thermal	Type	Hours/day	Duration	Responder
1	78	F	Primary TN	L	III	3	0	8	5	Yes	No	No	Add on	12	2	Yes
2	81	M	Primary TN	L	I, II	52	0	7	4	Yes	Yes	Yes	Add on	12	3	Yes
3	62	F	Primary TN	L	I, II	4	0	10	6	No	No	No	Switch	12	1	No
4	67	F	Primary TN	R	II	36	0	8	10	No	No	No	Add on	12	3	Yes
5	81	F	Primary TN	L	I, II	360	0	10	7	No	No	No	Add on	12	1	No
6	55	M	Primary TN	R	II, III	12	0	9	> 20	No	No	No	Add on	12	2	Yes
7	72	F	Primary TN	R	II	240	7	10	2	No	No	No	Add on	12-24	12	No*
8	82	F	Primary TN	R	II	60	0	10	20	No	No	No	Add on	12	2	Yes
9	73	F	Primary TN	L	II	36	0	8	15	No	No	No	Add on	12-16	4	Yes
10	67	M	Primary TN	R	III	84	0	10	> 20	No	No	No	Add on	12	8	Yes
11	58	F	Primary TN	L	II, III	60	4	10	15	No	No	No	Add on	12	9	Yes
12	65	M	Primary TN	L	II	20	6	10	> 20	No	No	No	Add on	12	8	Yes
13	44	F	Secondary TN	R	II	48	0	10	15	No	No	No	Add on	12	7	Yes
14	46	M	Secondary TN	L	III	24	8	9	15	No	No	No	Add on	12	12	No
15	65	F	Secondary TN	L	II	168	5	7	1	Yes	Yes	Yes	Add on	12	4	No*
16	80	F	TNP	R	I, II	3	8	0	0	Yes	Yes	Yes	Add on	18	1	Yes
17	90	M	TNP	R	II	12	5	8	1	No	Yes	No	Add on	12	2	No*
18	36	F	TNP	L	III	36	9	10	4	No	No	No	Add on	12-18	4	No
19	68	M	TNP	R	II	5	7	0	0	No	Yes	Yes	Add on	12-18	2	No

**Legend.** TN = trigeminal neuralgia. TNP = trigeminal neuropathic pain. I, II, III = first, second, and third branch of the trigeminal nerve. NRS = numerical rating scale. LMP = 5% lidocaine medicated plaster/patch. <sup>§</sup> duration in months. \* marks patients who continued the treatment with LMP because they were satisfied with pain reduction and/or the sleep quality.



Examples of pain distribution

## RESULTS

We recruited 19 patients (7 males, 66.8 years, SD 14.3) affected by primary TN (12 patients), secondary TN (3) and TNP (4). Mean pain duration was 66.4 months (SD 93.1). The intensity of continuous baseline pain was variable. The intensity of shock-like pain, when present, was severe. All patients were on therapy with drugs for TN or neuropathic pain (carbamazepine, pregabalin, gabapentin, antiepileptics, SNRIs, opioids), analgesics or a combination of them. LMP was introduced as add-on treatment, except in one patient, who was switched to LMP. Eleven patients (58%) responded to LMP. The responders were 9/12 (67%) in primary TN, 1/3 (33%) in secondary TN, 1/4 (25%) in TNP. Three patients, who were non responders continued LMP because of pain and/or sleep ameliorated. Mean shock-like NRS dropped from 9 to 5, and the mean number of shock-like episodes dropped from 11 to 4 after LMP. No patient reported side effects.

## CONCLUSIONS

LMP may ameliorated continuous and shock-like pain NRS, and the number of shock-like episodes in TN and TNP. Primary TN responded better to LMP than other conditions. Despite slight pain reduction, some patients continued LMP because of better pain control and sleep quality. LMP should be considered in TN and TNP patients when other drugs are not effective or cause significant side effects.