

## LASER THERAPY

Online ISSN : 1884-7269

Print ISSN : 0898-5901

ISSN-L : 0898-5901

[Journal home](#)    [Journal issue](#)    [About the journal](#)

Original Articles

### LOW REACTIVE LEVEL LASER THERAPY IN THE TREATMENT OF POST HERPETIC NEURALGIA

Katsumi Sasaki, Toshio Ohshiro, Takafumi Ohshiro, Yuki Taniguchi

[Author information](#)

Keywords: [LLLT](#), [post herpetic neuralgia](#), [pain relief](#), [retrospective study](#)

[JOURNALS](#)    [FREE ACCESS](#)

2010 Volume 19 Issue 2 Pages 101-105

DOI <https://doi.org/10.5978/islsm.19.101>

[Details](#)

### Abstract

---

Post herpetic neuralgia (PHN) can be an extremely painful condition which in many cases proves resistant to all the accepted forms of treatment. It is frequently most severe in the elderly and may persist for years with no predictable course. Since 1980, we have been applying low reactive level laser therapy (LLLT) for patients with PHN. We report herein on the results of a retrospective study concerning those patients in whom LLLT has been applied for pain attenuation of PHN. One hundred and twenty-three patients (73 male, 50 female, mean age: 66.11yr) have received LLLT for various entities of PHN over the past 29 years. In these cases the affected tissue area(s) was as follows: thorax and back (48 cases); head and neck (41 cases); abdomen and lumbar (17 cases); upper limb (9 cases); and lower limb (8 cases). The overall total improvement rate was 60.16%. Patient whose

treatment was given within six month of onset obtained the highest improvement rate (mean, 76.34%). LLLT was effective for PHN in the acute and chronic phase, but LLLT was particularly effective for the acute phase patients whose onset before treatment was 6 months or less. The results demonstrate a significant reduction in PHN pain intensity, hypersensitivity and other complaints

## References (19)

---

- 1: Dover M. (1991) Chronic pain in the aged: possible relation between neurogenesis involution and pathology in adult sensory ganglia. *J Basic Clin Physiol Pharmacol.* 2: 1-15
- 2: Lefkowitz M, Marimi RA (1994) Management of post herpetic neuralgia. *Ann Acad Med Singapore.* 23: 139-144
- 3: Kemmotsu O, et al. (1991) Efficacy of Low Reactive-Level Laser Therapy for Pain Attenuation of Postherpetic Neuralgia. *Laser Therapy* 3:71
- 4: Johnson RW. (2009) Herpes zoster and post herpetic neuralgia: a review of the effects of vaccination. *Aging Clin Exp* 21: 236-43
- 5: Kouroukli I, Neofytos D, et al (2009) Peripheral subcutaneous stimulation for the treatment of intractable post herpetic neuralgia: two case reports and literature review. *Pain Pract.* 9:225-229
- 6: Coen PG, Scott F. re cur (2006) Predicting and preventing post-herpetic neuralgia: are current risk factors useful in clinical practice? *Eur J Pain.* 10:695-700
- 7: Mondelli M, Romano C, et al (1996) Electrophysiological findings in peripheral fibers of subjects with and without post herpetic neuralgia. *Electroencephalogr Clin Neurophysiol.* 101: 185-191
- 8: Weinberg JM. (2007) Herpes zoster: epidemiology, natural history, and common complications. *J Am Acad Dermatol.* 57: s130-135
- 9: Sra KK, Tying SK. (2004) Treatment of post herpetic neuralgia. *Skin Therapy Lett.* 9:1-4
- 10: Moore KC, Hira N. (1998) A double blind crossover trial of low level laser therapy in the treatment of post herpetic neuralgia. *Laser Therapy Pilot Edition* 1: 61-64
- 11: Arvin AM (1996) Varicella-zoster virus: overview and clinical manifestations. *Semin Dermatol.* 15:4-7
- 12: Ohshiro T, Ohshiro T (2008): Low reactive laser Therapy for facial paralysis. *Laser Therapy* 17: 129-133

- 13: Karu T: (1999): Primary and secondary mechanisms of action of visible to near-IR radiation on cells. J Photochem Photobiol B.49:1-17.
- 14: Smith KC (2005): Laser (and LED) therapy is phototherapy. Photomed Laser Surg. 23: 78-80.
- 15: Sato T, Kawatani M (1994): Ga-Al-As laser irradiation inhibits neuronal activity associated with inflammation. Acupunct. Electrother Res. 19:141-151
- 16: Melzack R: From the gate to the neuromatrix. Pain, 1999; Suppl 6: S121-126.
- 17: Wall PD: The role of substantia gelatinosa as a gate control. Res Publ Assoc Res Nerv Ment Dis, 1980; 58: 205-31.
- 18: Komiyama E, Ogawa H. (2000): Low reactive-level laser therapy for the treatment of post herpetic neuralgia (third report) Re-evaluation of 100 cases. J Clin Dermatol. 54:1045-1049
- 19: Tsuchiya K, Kawatani M (1993): Diode laser irradiation selectivity diminishes slow component of axonal volleys to dorsal roots from the saphenous nerve in the rat. Neurosci Lett. 14: 65-68



## Information related to the author

---

## Cited by (1)

---

[James D. Carroll. Photomedicine and LLLT Literature Watch. Photomedicine and Laser Surgery. 2011, Vol.29, No.4, p.283.](#)

© 2010 Japan Medical Laser Laboratory

Edited and published by : International Society for Laser Surgery and Medicine International Phototherapy Association  
Asian-Pacific Association for Laser Medicine and Surgery Japanese Society for Laser Reproduction Japan Association for  
Laser Medicine and Sports Science World Federation of Societies for Laser Medicine and Surgery  
Produced and listed by : Japan Medical Laser Laboratory