Postherpetic neuralgia treatment

Treatment options for postherpetic neuralgia include antidepressants, anticonvulsants (such as gabapentin, pregabalin, or topiramate), gabapentin enacarbil (a prodrug of gabapentin) and topical agents such as lidocaine patches or capsaicin lotion. Opioid analgesics may also be appropriate in many situations. There are some sporadically successful experimental treatments, such as rhizotomy (severing or damaging the affected nerve to relieve pain) and TENS (a type of electrical pulse therapy).

Makharita introduces a new Ten-step Model for the prevention of PHN. The idea of this newly suggested approach is to increase the awareness of the health care team and the community about the nature of HZ and its complications, especially in the high-risk groups [1].

Nerve blocks provide only temporary relief [2].

Although open thoracic cordotomy may be cautiously recommended as a treatment option in certain settings, this procedure should be viewed only as a second-line treatment option in settings where the technology and expertise to perform percutaneous cervical cordotomy (PCC) are available [3].

Rhizotomy: including retrogasserian for facial involvement.

Neurectomy.

Sympathectomy.

DREZ.Friedman and Nashold, attempted to diminish postherpetic neuralgia in 17 patients by making dorsal root entry zone (DREZ) lesions. They describe the clinical syndrome of pain after herpes zoster, the incidence of which increases with age, and discuss its pathology. They briefly review the medical and surgical treatment of postherpetic neuralgia. Often offers good early relief, but recurrence rate is high [4].

Acupuncture.A single blind randomised controlled study of auricular and body acupuncture compared with placebo (mock transcutaneous nerve stimulation) was performed in 62 patients with post-herpetic neuralgia. There was no difference in the amount of pain relief recorded in the two groups during or after treatment; 7 patients in the placebo group and 7 patients in the acupuncture group experienced significant improvement in their pain at the end of treatment. This suggests that acupuncture is of little value as an analgesic therapy for post-herpetic neuralgia. However the study method and the use of a mock transcutaneous nerve stimulator as a placebo may be of value when assessing the effects of acupuncture in other conditions [5].

TENS.

Spinal cord stimulation.

Undermining the skin.

Motor cortex stimulation.

PainVision device was a developed application for the evaluation of pain intensity. The objective was to assess the efficacy and safety of pulsed radiofrequency (PRF) combined with pharmacological therapy in the treatment of postherpetic neuralgia (PHN).

Wang et al. also discussed the correlation of the measurements.

Forty patients with PHN were randomized for treatment with PRF combined with pharmacological therapy (PRF group, n = 20) or pharmacological therapy (control group, n = 20) at postoperative 48 hours. The efficacy measure was pain degree (PD) that was assessed by PainVision and visual analog scale (VAS), Short form McGill Pain Questionnaire (SF-Mcgill), and numeric rate scale sleep interference score (NRSSIS). Correlations between PD, VAS, SF-Mcgill, and NRSSIS were determined.

The PD for persistent pain (PP) and breakthrough pain (BTP) at postoperative 48 hours assessed by PainVision were significantly lower in PRF group than in control group (PD-PP, $P < 0.01$; PD-BTP, $P < 0.01$). PD and VAS were highly correlated for both persistent pain ($r = 0.453$, $\rho = 0.008$) and breakthrough pain ($r = 0.64$, $\rho = 0.001$). Conclusion. PRF was well tolerated and superior to isolated pharmacological therapy in the treatment of PHN. PainVision device showed great value in the evaluation of pain intensity and PD had an excellent correlation with VAS and SF-Mcgill [6].

Intrathecal steroids

Over 90% of patients receiving intrathecal methylprednisolone (60mg)+3% lidocaine (3ml) given once per week for up to 4 weeks, reported good to excellent pain relief for up to 2 years [7]. This technique was not studied for use in PHN involving the trigeminal nerve. Further clinical trials are needed to verify the efficacy and safety [8] (potential long-term side effects include adhesive arachnoiditis).

Systematic review

Song et al. conducted a systematic review of the current literature. All relevant studies were retrieved from online databases. The standardized mean difference (SMD) was used for pain relief measurement in different PHN therapies.

A conventional meta-analysis and a network meta-analysis (NMA) were carried out together with the surface under the cumulative ranking curve (SUCRA) for each therapy calculated regarding their efficacy.

A pairwise meta-analysis suggested that 4 treatment classes, including topical therapies, antiepileptics, analgesics, and antidepressants, exhibited better pain relief results than placebo. Likewise, a NMA suggested that patients with 4 treatment classes exhibited significant improvements in pain scores compared to those with placebo.

There is a lack of direct head-to-head comparisons of some treatments, especially for antivirals, anti-dementia drugs, and magnesium sulfate. Secondly, the specific agents belonging to the same class of therapies might exhibit different effects (gabapentin and carisbamate) with different mechanisms (opioids and ketamine) on reducing pain, and some agents were hard to find in literatures and were not involved in our study, which may influence our results.

Analgesics were preferable to other treatments with respect to pain relief for PHN, while antivirals appeared to be less effective than other therapies [9].

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