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# Triple-target Regimen for Treatment of Chronic Pain following Post Herpic Neuralgia (CPPHN): A Prospective Trial at Jordan University Hospital (JUH) Pain Unit

Bashir Atiyat*

**Background: Chronic pain post herpic neuralgia (CPPHN) is one of the most difficult chronic pain problems. It has been recognized that CPPHN has three components: central, emotional and peripheral. Several studies have addressed the management of these components individually[1-3]. The purpose of this study was to determine the effect of manging these three components together in the same patient.**

**Design: A prospective study.**

**Setting: Jordan University hospital, Department of Anaesthesia, Pain Unit.**

**Methods: Prospective evaluation of 50 patients with chronic (CPPHN) from March 1990-June 1997. All patients had pain for more than 6 months upon entry to the study. All patients were given Tramadol, amitryptaline and steroids for 6 months. Subcostal block using Ethanol and Lignocaine was used once on day 5. Pain assessment was performed according to visual analogue sequar (VAS).**

**Result: Complete cure was achieved in 70% of the patients at the end of 6 months therapy, mild tolerable pain continued in 10%, moderate to severe untolerable in 20%.**

**Conclusion: Combined management for the three components of (CPPHN) by using drugs and local block appear to improve the outcome of these patients.**

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Treating the CPPHN and it's sequalae has been the central focus of research in many international institutions. However, the efficacy of many proposed protocols are still not perfect and in many cases the clinicians are faced with difficulties[4-8]. It is well known that CPPHN pathophysiologically has three components; central involvement[9] peripheral neural change[10,11] and the emotional aspects[12]. A limited number of studies investigating the central mechanism were done [13,14]. It has been demonstrated that the role of N-Methyl-D-aspartic acid (NMDA) receptor blocking agents are crucial in the control of pain attributed to the central component[15,16]. It has been proved that changes on the peripheral nerves, both axonal and nerve sheath, are also involved[17]. In addition, involvement of the central emotional areas also play a role in making CPPHN a more complex phenomena. In this study, we demonstrate our experience in tackling the aforementioned mechanisms in trying to achieve an acceptable degree of success in managing these patients.

* Associate Professor
Jordan University Hospital
Jubeiha, Amman - Jordan

## METHODS

Seventy two patients were seen at the pain clinic of Jordan University Hospital complaining of persistent post herpic pain for more than 6 months. All of the patients were given classical treatment for herpes consisting of Zovirax 1000 mg daily over the same period. The patients were given Amitryptiline, Tramadol and steroids for 5 days, then revalued for their tolerance and willingness to continue the study. Fifty patients agreed to continue the study. All the fifty patients were given Tramadol (100mg x 2), Dexamethasone (2 mg x 4) and Amitryptiline (25 mg x 3) orally and has subcostal nerve block (2-5) segments using 3 mls of Ethanol 96% at midaxillary line once. All these received 3 mls of 1% plain lignocaine before and after Ethanol block in order to prevent burning sensation which can occur after injection of Ethanol and to facilitate the injection without pain. Patients continued to receive amitryptiline, Tramadol and Dexamethasone till the end of the study after 6 months.

All patients were evaluated on monthly basis using VAS to measure the severity of pain and tolerance to drugs. The study was concluded at 6 months because 10 patients were lost to follow up after that period.

## RESULTS

The evaluation of our results was done through direct interviewing of the patients in their regular clinic visits. The first phase of assessment was performed immediately after five days of receiving Tramadol-hydrochloride and Amitryptaline. Pain and cooperation were evaluated (Table 1) knowing that the peak action of Amitryptaline will appear after 3 weeks on average. In the mean time, all patients were educated about the importance of these early results and their impact on the following long term results and they all understood that the pain component results may be unsatisfactory after the initial phase. Fifty patients accepted our proposal and decided to continue the regimen. The second phase of evaluation was done for each patient once every month during the six months period of study (Table 1). The presence of mouth dryness and dizziness were also evaluated because of their importance as expected side effects of the regimen used. Two patients (4%) needed symptomatic treatment for dizziness and dryness of the mouth in the form of Metoclopramide-hydrochloride (10 mgs i.m.) and humidification with satisfactory results and without interrupting the protocol. After completion of the regimen, 35 patients (70%) had no pain, 5 patients (10%) had mild tolerable pain and 10 patients (2050 continued to have moderate to severe intolerable pain.

Table 1. **Observation of the second phase**

| Months | Number of patients with mild tolerable pain | Number of patient with moderate to severe non tolerable pain |
|---|---|---|
| 1 month | 3 (6%) | 0 |
| 2 months | 3 (6%) | 5 (10%) |
| 3 months | 4 (8%) | 5 (10%) |
| 4 months | 6 (12%) | 7 (14%) |
| 5 months | 5 (10%) | 10 (20%) |
| 6 months | 5 (10%) | 10 (30%) |

## DISCUSSION

In view of the literature, it is now clear that CPPHN has three components which play a role in the development of pain. These components were targets for many study protocols to establish a reasonable management regimen. However, many of these trials concentrated on one or two of these components[18,19]. In our prospective study, the aforementioned aspects were targeted at the same time, trying to achieve maximum possible success. Pain is the major component which contributes to the suffering of patients with CPPHN. Many previous trials had shown fluctuation in the response of a countless numbers of management approaches. Adding more complexity to these patients is the fact that many of them are middle aged to elderly with or without immune suppression[20].

This in part, could explain the difficulties faced by many investigators and clinicians to achieve more satisfactory results. Therefore, we tried our regimen hoping that this approach which targeted all three components may be more effective to maximize the success of management. And this is clearly demonstrated in our results. Thirty five patients (70%) had no pain after completion of our protocol. In addition, 5 patients (10%) continued to have a mild degree of pain which was tolerated and did not need further active intervention and these patients were quite satisfied about their situation. So, our actual measured success rate is indeed 70% (35 patients). We have to admit that, to our knowledge, there are no previous well documented studies analyzing pain threshold and perception in our region. However, from a personal unpublished observation, which is shared by many of our colleagues in the region, our patients tend to exaggerate pain and are thought to act more emotional about it. In a recent study, it was shown that factors related to culture, environment and emotion all play a role in the perception of pain. Furthermore, in our part of the world it was noticed that the degree of education, the financial status and the availability of health insurance are all important factors which dictates the response of the patients to pain.

## CONCLUSION

**We all know that the effect of neurolytic block is high immediately and may be shortly after the block performance. So, early determination of success may be deceiving, therefore, we choose to determine our overall success at the end of 6 months to avoid the deceptive impression of early premature evaluation of response.**

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