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A SURVEY TO OBSERVE THE COMMONLY USED TREATMENT PROTOCOL FOR TRIGEMINAL NEURALGIA BY PHYSIOTHERAPIST

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ABSTRACT

Background: Trigeminal neuralgia (TN) is also known as prosoplasia it is also termed as a Suicidal disease or Fothergill disease. The neuropathic condition is characterized by recurrent episodes of facial pains which are triggered by touch, chewing and shaving. The pain initiates from the 5th cranial nerve which is known as trigeminal nerve. The objective of this study was to evaluate treatment protocol used by physiotherapist for trigeminal neuralgia patients.

Methods: It was cross-sectional descriptive study in which data was collected from certified physiotherapists working in private/government hospitals for more than 1 year in Karachi. The sample size was 60 and Purposive random sampling technique was used. The data collection procedure was questionnaire based that was filled by physiotherapists.

Results: In this study 77% physiotherapist's answered that physiotherapy is helpful in patients with T.N and, 23% said that it is not beneficial. 13.3% patients reported that they were taking medicines other than steroid and analgesics like (carbamazepine, gabapentine), 50% were taking steroids, 33.3% were taking NSAIDs, and 3.3% were taking antibiotics. Regarding Modality prescribed by physiotherapists in Trigeminal Neuralgia 68% physiotherapists used TENS to treat the disease, 30% used electrical stimulation and only 2% used ultrasound.

Conclusions: Physiotherapy treatment is effective in the patients of T.N. Awareness needs to be generated amongst general public concern in the role of physiotherapy relating to the disease. The symptoms of some patients are not eased by the medicines, they should move toward electrical stimulation.

Keywords: Trans cutaneous nerve, awareness, neuralgia, protocol, physiotherapy

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INTRODUCTION

Trigeminal neuralgia is one of extremely painful long-term condition of the fifth cranial nerve which supplies sensation to the face and characterized by recurrent electric shock-like pain in one or more branches of the trigeminal nerve (maxillary, mandibular, and ophthalmic branches), [1] Trigeminal nerve can involves unilateral or bilateral side of face and its pain duration in face vary from patient to patient ,It can be last from a second or a minute or longer, In each day some individuals could have up to 100 lightning-like bursts of stabbing pain, Although remissions are common. Washing or shaving of face, heat or cold, wind hitting the face, chewing, yawning, or talking are few stimulus which triggered T.N [2,3]. The condition is known as tic douloureux or painful twitch. National institute of neurological disorders and stroke observed that trigeminal neuralgia is more common in women than in men with ratio of 3:2 to 2:1. Additionally, there is also evidence that the disorder runs in families, likely due to an inherited blood vessel formation. Hypertension and multiple sclerosis also are risk factors for this disease [4]. Approximately 1.5 cases per 10,000 populations have been reported. Incidence of approximately 15,000 cases per year is diagnosed with trigeminal neuralgia, while this ailment can occur at any age but the most common age is 50 years in about 90% of cases. Although there have been cases reported with patients being as young as three years of age [5]. The objective of this study is to assess various physiotherapy treatment protocols in trigeminal neuralgia used by physiotherapists, Efficacy of physiotherapy treatment protocols in trigeminal neuralgia as well as awareness among people about physiotherapy role in treating patients with Trigeminal neuralgia.

METHODOLOGY

It was cross sectional descriptive study which was conducted in tertiary care hospital of Karachi. Those participants included in this study that has education BScPT (Bachelor of Science in Physical Therapy) DPT (Doctor of Physical Therapy) MSPT (Master of Science in Physical Therapy) or more than 1 years of working experience after BSct or DPT. Diploma holders and technicians excluded for this study. Duration of study was one year and non probability purposive sampling technique used in this study, Estimated calculated sample size of participants for this study was 60, Which was selected from various tertiary care hospital for data extraction. A self administered questionnaire used for this study which was distributed among study participant. Questionnaire was based on demographic data, various protocol for treatment of T.N data i.e. Tens, ultrasound, infrared; Acupuncture as well as few questions was included about awareness among physiotherapist about T.N data. After filling the questionnaire by all the physiotherapists, data was analyzed to check for role of physiotherapy in patients with T.N and various treatment protocols mentioned by different physiotherapists. The results obtained were processed using different statistical tools (SPSS software and Microsoft excel) and is demonstrated in form of

tables graphs and figures so that it is easier for the reader to understand and apprehend the obtained results.

RESULTS

In this study the age group of patients with trigeminal neuralgia was 41-50 years in 56.7% cases and 51 or above in 30% of cases, 31-40 years in 10%, 10-20 in 1.7% and 31-40 years in 1.7% of cases 88.3%. Physiotherapists have seen only 1-5 patients of Trigeminal Neuralgia, 10% of them have seen 6-10 patients, and only 1.7% have seen more than 21 patients. Out of 60 physiotherapists 29 reported that they have treated male patients and 27 reported they have treated female patients and only 4 physiotherapists reported who Have treated both the gender.

When participants were asked about medication usage 13.3% patients reported that they were taking medicines other than steroid and analgesics like (carbamezipine, gabapentine), 50% were taking steroids, 33.3% were taking NSAIDs, and 3.3% were taking antibiotics. Regarding Modality prescribed by physiotherapists in Trigeminal Neuralgia 68% physiotherapists used TENS to treat the disease, 30% used electrical stimulation and only 2% used ultrasound.

When patients were questioned about symptoms relieved from physiotherapy; Out of 60 physiotherapists, 29 reported that 50-75% symptoms were relieved with physiotherapy treatment. 22 said that 10-40% symptoms were assed and only one physiotherapist said that with physiotherapy treatment 100% symptoms lessened but eight physiotherapists have reported that symptoms were not mitigated in any case. Regarding effectiveness of physiotherapy treatment, 77% physiotherapists said that physiotherapy is helpful in patients with Trigeminal Neuralgia and 23% said that it was not helpful.

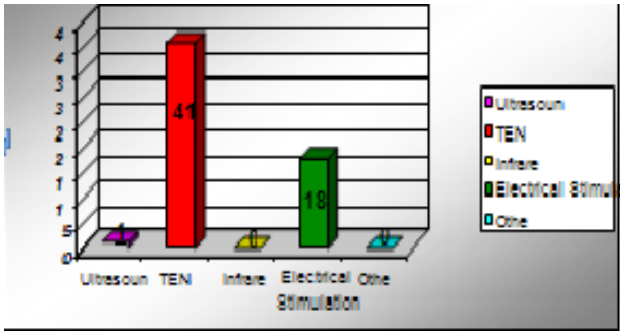
Data analysis:

	100%	50-75%	10-40%	0%	P-Value
10-20 years	0	0	1	0	0.726
21-30years	0	0	1	0	
31-40 years	0	5	1	0	
41-50 years	1	15	12	6	
51+years	0	9	7	2	

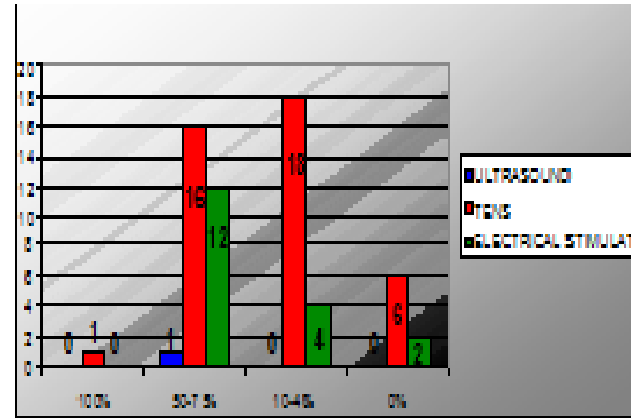
Table 1: Frequency and association of percentage of symptoms relieved in patients with trigeminal neuralgia according to age group.

	100%	560-75%	40-10%	0%	P-value
ULTRA-SOUND	0	1	0	0	0.340
TENS	1	16	18	6	
ELECTRICAL STIMULATION	0	12	4	2	

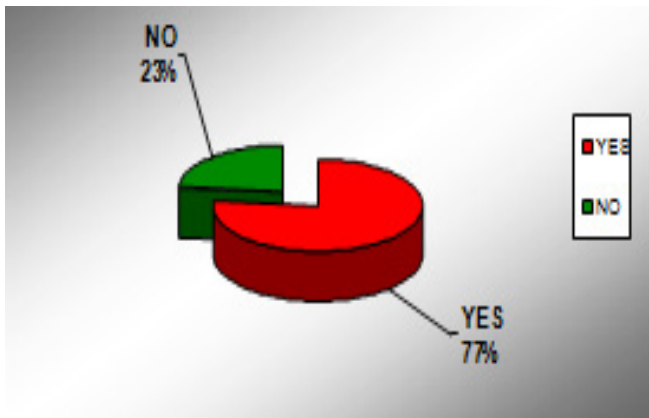
Table 2: Frequency and association of percentage of symptoms relieved in patients with trigeminal neuralgia according to modality prescribed by physiotherapists



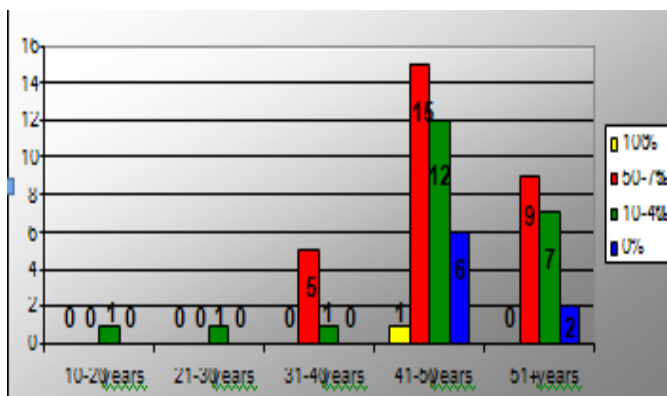
Graph 1: Modality prescribed by physiotherapists in trigeminal neuralgia.



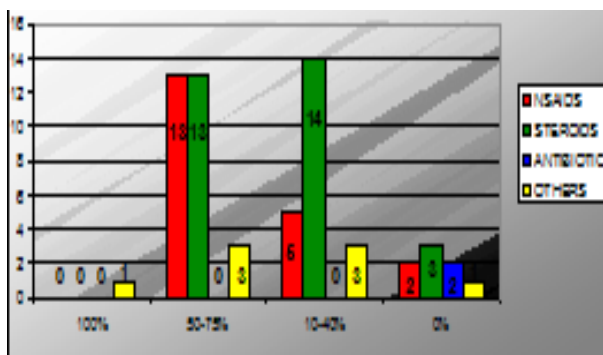
Graph 5: Frequency and association of percentage of symptoms relieved in patients with trigeminal neuralgia according to modality prescribed by physiotherapists.



Graph 2: Role of physiotherapy treatment in T.N



Graph 3: Frequency and association in percentage of symptoms relieved in patients with trigeminal neuralgia according to age group



Graph 4: Frequency and association of percentage of symptoms relieved in patients with trigeminal neuralgia according to types of medications patient was taking.

DISCUSSION

Overall results of this study indicating the use of TENS as treatment modality for trigeminal neuralgia is a common practice in physiotherapy and most used approach. Some physiotherapists also preferred acupuncture technique in treating trigeminal neuralgia, [4,5] present study is not considering that as physiotherapy modality.

Dildip Khanal et al in 2014 reported the recovery of 5 Patients suffering with trigeminal neuralgia who were treated with continuous Transcutaneous Electrical Nerve Stimulation (TENS) [6]. The result of VAS and Brief Pain Inventory-Facial scale depicts significant results as indicated by a decrease in the scores within four weeks of treatment. The results of the study showed that using continuous TENS, Relaxation technique, hot moist pack over the trapezius muscles, Isometric neck exercise reduces pain. The results of this study were in line with present study.

Apart from TENS, the use of IFT is also evident in our study, which is similar to the results of B.leonard F et al's study in which, effect of interferential therapy (IFT) on trigeminal neuralgia patients, giving strength to support IFT to be considered as one of the electro-physical modalities in the reduction of pain for trigeminal neuralgia patients. Hence it is evident by previous studies that those patients who didn't response by conventional therapy could be treated by electrical stimulation for fast recovery and pain management [7]. We reported 68% physiotherapists used TENS to treat the disease and only 2% used ultrasound [8]. In this study we found seldom practice of acupuncture by physiotherapist in their clinical setups; it may be due to lack of knowledge about usage and expertise in this technique domain. The practice of acupuncture is not the domain of physiotherapy till now and the technique of application needs expertise. Previous study also suggested about proper acupuncture angulations for trigeminal neuralgia patient and reported their finding that greater the angle between the offending vessels and trigeminal nerve, the lesser the acupuncture effects [9] like vise several technical aspects were not familiar to the physiotherapists.

Singla S, Prabhakar in 2011 did a study to see the role of TENS in the management of trigeminal neuralgia [10] and

they found that pain on (VAS) scale score decreased from 8.9 (Pre TENS) to 3.1 at 1 month, and 1.3 at 3 months and, pain on (VPS) the score decreased from 3.5 (Pre TENS) to 1.2 at 1 month and, 0.3 at 3 months. Similarly, a considerable decrease in scores was seen on functional outcome scale for different activities. So they conclude that TENS should be considered as safe, simple, and reusable first line of treatment for many pain conditions including trigeminal neuralgia. Faisal.Y et al determined the efficacy of Transcutaneous Electrical Nerve Stimulation therapy and its different modes in trigeminal neuralgia, to find out the comparative effectiveness of different modes of TENS therapy in trigeminal neuralgia cases by prospective analytical study, and this study was conducted over a period of one year. They conclude that TENS therapy is an effective and easy to use with minimal side effects in patients with trigeminal neuralgia. And also the constant mode of therapy was found to be better than burst mode therapy [1].

CONCLUSION

Physiotherapy treatment is effective in the patients of trigeminal neuralgia. Awareness needs to be generated amongst general public concerning the role of physiotherapy relating to the disease. The symptoms of some patients are not eased by the medicines; they should opt for electrical stimulation. The management options frequently used in physiotherapy to treat trigeminal neuralgia were TENS, IFT, Electrical stimulation and Ultra sound.

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