

Effect of Electro acupuncture Therapy on back pain Subjects

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BACKGROUND: Electroacupuncture therapy involves use of low frequency electric current plus traditional acupuncture therapy in treatment of various diseases. The present study was conducted to evaluate the effectiveness of Electroacupuncture therapy in 26 subjects of Backpain. **MATERIAL AND METHOD:** During the study, all the Backpain subjects were given Electroacupuncture treatment by an instrument called POINTER EXCEL II. Electroacupuncture therapy was given for ten to fifteen minutes and response was noted whether the treatment is beneficial for pain relief or not. **RESULT:** in present study we observed that 17 out of 26 subjects were fully recovered from Backpain and 9 subjects were not shown much improvement. This Electroacupuncture therapy showed 65% effectiveness. **Conclusion:** Our study concluded that Electroacupuncture therapy is beneficial in treatment of Backpain.

Key words: Electroacupuncture, Backpain, POINTER EXCEL II

INTRODUCTION

Electro-acupuncture is the term used to refer to the application of a pulsating electrical current to acupuncture needles, or even without needles, to acupuncture points on the body. This Oriental medicine technique was developed in China in the 1930's. Acupuncture operates on the idea that a person's life force (QI or CHI) runs through body along certain meridians, and that specific points on the body correspond with these meridians. When these points are 'activated' or stimulated by touch, specific complaints of chronic pain or illnesses can be alleviated. Using a gentle electrical current in conjunction with, or instead of, acupuncture needles, is an alternative way to stimulate the point and enhance the life force. Electro-acupuncture treatments are often shorter than regular acupuncture treatments due to the continued, and often stronger, stimulus. While electro-acupuncture may be used as a component of almost all acupuncture treatments, it has garnered especially good results regarding the treatment of

neurological diseases, chronic pain, spasms, and paralysis. Using the same points as traditional acupuncture, electro-acupuncture is a convenient stimulation technique that can be used for a variety of treatments.¹

Electroacupuncture is quite similar to traditional acupuncture in that the same points are stimulated during treatment. As with traditional acupuncture, needles are inserted on specific points along the body. The needles are then attached to a device that generates continuous electric pulses using small clips. These devices are used to adjust the frequency and intensity of the impulse being delivered, depending on the condition being treated. Electro acupuncture uses two needles at a time so that the impulses can pass from one needle to the other. Several pairs of needles can be stimulated simultaneously, usually for no more than 30 minutes at a time. One advantage of Electroacupuncture is that a practitioner does not have to be as precise with the insertion of needles. This is because the current delivered through the needle stimulates a larger area than the needle itself. Another advantage is that Electro acupuncture can be employed without using needles. A similar technique called transcutaneous electrical nerve stimulation, or TENS, uses electrodes that are taped to the surface of the skin instead

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of being inserted. The advantage of this procedure is that it can be used by people who have a fear of needles or a condition that prohibits them from being needed.^{2,3,4,5,6}

MATERIAL AND METHOD

The study was carried out in 26 patients having complained of back pain. Both sexes are included in study with no age limit. The approval of B. J. Medical College; Ahmedabad human ethics committee was obtained. All the subjects were properly explained about the aim, objectives, methodology, expected outcome and implications prior to the commencement of the study. Procedure was carried out using the machine named POINTER EXCEL II.⁷ The model Pointer Excel II is a newly designed, accurate, and easy to operate hand held trigger point locator which incorporates an effective push button stimulation feature. This may be used for the immediate treatment of the point or area following its detection. It features a digital display to show the frequency of stimulation during operation, and numerical display to show the sensitivity of detection during the location of acupuncture points. This unit is fully equipped with distinguished features such as polarity change-over switch, frequency selection and micro current stimulation etc. On the body surface the electric resistance of a trigger point or a reactive point is lower than in its surrounding areas. It can be readily located by means of an instrument which is sensitive to resistance changes. When the metal probe touches a low resistance point the loudspeaker gives a sound signal. Its pitch rises with the lowering of the electric resistance of the skin. With this instrument and method of detection, trigger points thus located usually produce a strong sensation and reaction to electric stimulation, and will achieve the best therapeutic results.

RESULT

The Study was carried out in 26 patients of Back pain including both sexes. Effectiveness of treatment is observed as follow: Out of 26 patients, 17 patients were fully recovered from back pain and 9

patients were not showing any improvement.

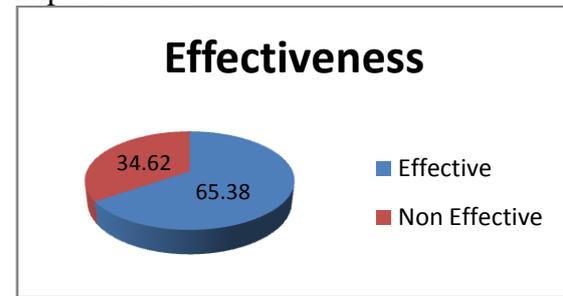


Table: 1 According to duration of back pain

Duration of Back Pain	Effective	Non Effective
Less than 1 Year	11	4
More than 1 Year	6	5

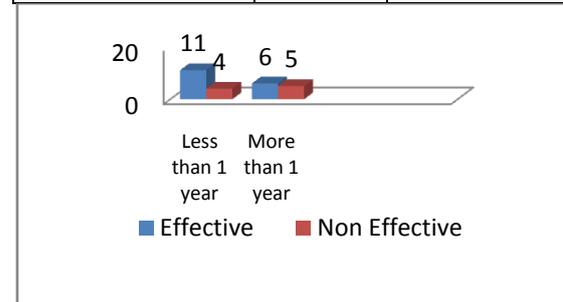


Table: 2 According to Age

AGE	Effective	Non Effective
Below 50 year	11	4
Above 50 year	6	5

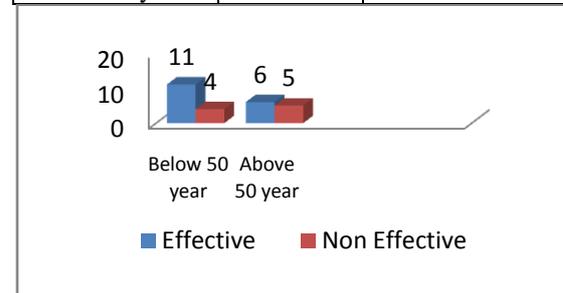
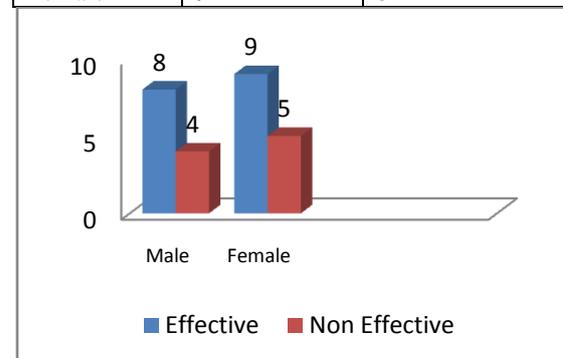


Table: 3 According to Sex

Sex	Effective	Non effective
Male	8	4
Female	9	5



DISCUSSION

Total 26 patients were treated with pointer excel electroacupuncture treatment. Out of 26 patients, 17 patients had complete

relief from back pain and remaining 9 patient were not completely cured. The Pie Chart Shows 65.38% effectiveness of treatment given with POINTER EXCEL. Table 1 Patients of Back pain are divided according to duration of Back pain into 2 groups First group had Back pain of less than 1 year of duration which includes 15 patients Second group had back pain of more than 1 year of duration which includes 11 patient In first group effectiveness of treatment is around 73% {11 out of 15} In second group effectiveness of treatment is around 54% {6 out of 11} So from this table we can say this Treatment with POINTER EXCEL is more effective in patient of back pain of shorter duration Table 2 In second table patients are divided according to age into 2 groups First group contains patients of back pain with age below 50 years which includes 15 patients Second group contains patients of back pain with age above 50 years which includes 11 patients In first group effectiveness of treatment is around 73% {11 out of 15} In second group effectiveness of treatment is around 54% {6 out of 11} So from this table we can say this Treatment with POINTER EXCEL is more effective in younger age group patients Table 3 In third table patients of back pain are divided according to sex into male and female group There are 12 male and 14 female patients Effectiveness of treatment in males is around 66% {8 out of 12} Effectiveness of treatment in females is around 64% {9 out of 14} So from this table we can say the treatment with POINTER EXCEL has not any influence on sex

A Study carried out by Xian-Yu Liu et al shows that Electroacupuncture stimulation at 100 Hz can protect axotomized dopaminergic neurons from degeneration by inhibiting microglia activation.^{8 9 10} Also Electroacupuncture therapy is proved to be beneficial in post operative pain control after mandibular third molar surgery.¹¹ Similar study was carried out by Lehmann TR et al using Electroacupuncture and TENS (Transcutaneous Electrical Nerve Stimulation) was effective in the rehabilitation of chronic low backpain

patients.¹² A Randomized controlled trial comparing the effectiveness of Electroacupuncture and TENS (Transcutaneous Electrical Nerve Stimulation) for low back pain carried out by Tsukayama H et al shows Electroacupuncture therapy is more effective and beneficial than TENS for low Backpain treatment.¹³

CONCLUSION

Back pain affects 65-80% of the population at some time in their lives. It is responsible for much disability and health care expenditure. People with chronic neck and back pain often do not respond to or develop side effects from conventional treatments such as injections, medications, physical therapy, manipulation and surgery. Therefore, better treatments are needed and electroacupuncture may turn out to be a complement to the existing treatments. Electroacupuncture is a simple, easy-to-learn, fairly cheap and safe treatment. Electroacupuncture is an established adjuvant analgesic modality for the treatment of chronic back pain. In our study 17 out of 26 patients had respond positively to electroacupuncture treatment. So, besides conventional medical therapy electroacupuncture, an alternative medicine therapy is a valuable option for the treatment of back pain

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