

# A Clinical Study on Role of T(E)Ns In Primary Fibrositis Syndrome

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**A total of 20 patients diagnosed as fibrositis syndrome have been selected from an out-patient rheumatic clinic of a State Hospital. All the patients have been subjected to Transcutaneous electrical nerve stimulation therapy in a routine way. Excellent results have been obtained in 80% cases. No side effects have been noticed.**

The Transcutaneous Electrical Nerve Stimulation or T (E) NS is application of pulsed rectangular wave current directly over patient's skin surface by surface electrodes. Such low frequency currents of small intensity (0 to 60 m A, guide : Tingling sensation with or without feeling of pins or needles) are applied over the greatest intensity of pain or trigger points for reducing and removing pain in chronic pain syndrome. The electrical paresthesia to decrease or control pain first appeared in 1914 (Burchlow 1919, cited by Mannheimer), and became modified as many companies in various countries started manufacturing this device in different models. However it was Mannheimer (1984) who gave T (E) NS uses and effectiveness in the International perspectives in Physical therapy. The method is getting place as a physical therapeutic agent due to its advantage that it is simple to use and it is a small portable unit which the patient himself can apply directly over the painful area.

Soft tissue rheumatism or non articular rheumatism, according to Stockman (1940), is a condition of chronic inflammation of white fibrous tissue of the fascial aponeuroses, sheaths of

muscles and nerves, ligaments, tendons, subcutaneous tissue, occurring in all parts of the body, and giving rise to pain, aching, stiffness and other symptoms. Fibrositis is such a condition presenting with local pain, tender fibrous nodules (some times fibrous bands in subcutaneous tissue or within muscles).

The aim of this study is to evaluate the role of T(E) NS in a series of patients suffering from fibrositis syndrome, in a crowded out - patient's department of a State hospital.

Hence psychological assessment of these patients was also felt necessary.

## Material and Method:

20 (twenty) cases of primary or Idiopathic soft tissue rheumatism were chosen from the Rheumatology clinic of Physical Medicine department of R.G. Kar Medical College, Calcutta, for study, after completion of their necessary pathological, radiological investigations, and diagnosed as Fibrositis. Full psychological assessments were done in all the cases. Then they were subjected to T (E) NS therapy, 30 minutes

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daily sitting. Ten sittings were considered as one course of treatment and review was done after every course. As & when necessary treatment was continued upto 2,3 or 4 courses. This study was carried out from January 1989 to June 1989. i.e. for a period of six months, and all the cases were followed for another 3 months, and the results were tabulated after the month of september 1989.

The criteria for assessment of results were:

#### I. Excellent

1. Pain relieved with two courses (i.e. 20 sittings of therapy).
2. No discomfort, No local tenderness.
3. No relapse within 3 months after complete relief of symptoms.

#### II. Good

1. Pain relieved in three or four courses (i.e. 30 to 40 sittings of therapy).
2. No tenderness, no discomfort.
3. No relapse within 3 months after complete relief.

#### III. Fair

1. Pain relieved within four courses. (i.e. within 40 sittings of therapy)
2. No tenderness, but slight discomfort persisting.
3. Relapse of pain occurred within 3 months period, and one more course of therapy given to get complete relief, and no more relapse within next 3 months.

#### IV. Poor

1. Pain not completely relieved even after completion of four courses.
2. Tenderness persisting.

#### V. Side effects

1. Drowsiness.
2. Exaggerated pain response.

#### Observation

Table-I

	Age in years	No. of Patients	
		Female	Male
A.	Below 15	NIL	NIL
B.	16-20	3	NIL
C.	21-25	10	NIL
D.	26-30	5	2
E.	Above 31	NIL	NIL
TOTAL		18	2

Table-II:  
Site of Fibrositis

	Site	No. of Patients
A.	Interscapular region	12
B.	Lower Cervical	3
C.	Lumbar (Low back trunk)	1
D.	Supra spinatus	4
TOTAL		20

Table-III:  
Results of Psychological Assessment.

Mental Status	No. of Patients	
	Female	Male
Free	2	NIL
Not Free	16	2
TOTAL	18	2

**Table-IV:**  
**Results of Treatment**

No. of Patients		Female		Male
A. Excellent	16	80%	14	2
B. Good	2	10%	2	NIL
C. Fair	1	5%	1	NIL
D. Poor	1	5%	1	NIL
TOTAL	20		18	2
E. Side effects	NIL			

### Discussion:

From table I it is evident that fibrositis syndrome is common in Females, and in the age group 21 to 25 years. From table II it is evident that the most common site of fibrositis is interscapular region. From table III it is evident that in most of the cases, the mental status is not normal. Only 2 cases (out of 20) have been declared psychologically free by the psychologist.

There were only 2 male patients in this series and both of them showed excellent result by this therapy. There were 18 female patients, out of which 14 showed excellent results, and good, fair and poor were 2, 1 and 1 respectively. Thus T (E) NS is an excellent method of therapy to provide analgesia, without change of psychological state of the body, in fibrositis syndrome, showing 80% excellent results, and 10% good results and 5% fair results. Only 5% of cases showed poor results. There is also no side effects.

Good results so far as analgesia is concerned, have been reported, following T (E) NS therapy in chronic pain syndrome (Ebersold et al (1975),

Loeser et al (1975), but the mechanism by which pain is removed or controlled is not clear. The gate control theory (by predominating A-Fibre input carrying touch, pressure, thermal stimulus and inhibiting C-Fibres-a physiological mechanism to close the gate to pain at substantia gelatinosa of dorsal column of spinal cord) may be a possible explanation. Similarly counter irritation, conduction block, neuro humoral liberation theory etc. are not definitive to strongly support their views. However, the complete discussion is available in the study of Mannheimer et al (1984) where the cutaneous stimulation has been shown to inhibit release of substance P, a neuro-transmitter needed to promote propagation of pain stimuli.

However this method cannot be considered a treatment modality for specific treatment. But it can surely assist in one phase of rehabilitation programme which is concerned with pain control.

### SUMMARY:

A total of 20 patients diagnosed as fibrositis syndrome have been selected from an out-patient Rheumatic clinic of a State hospital. All the patients have been subjected to Transcutaneous electrical nerve stimulation therapy in a routine way. Excellent results have been obtained in 80% cases. No side effects have been noticed.

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