

Effectiveness Of Functional Training And Electrical Stimulation In Patient With Facial Palsy.

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ABSTRACT

Introduction: Paralysis of the part of the face caused by non-functioning of the nerve that controls the muscles of the face, especially the muscles around the eye and to the mouth. The nerve affected in facial Palsy, the facial nerve is one of the cranial nerves it is also called the seventh cranial nerve it has a complex course from the brain stem to reach the muscles of facial expression. Functional training is applied to incorporate the primary improvement functions of the face including the expression of emotions and other motor functions into the Patients daily activities. The combine effect of Functional training and electrical stimulation give beneficiary effect on the facial palsy.

Objective: To study the effect of functional training and electrical stimulation in patient with facial palsy.

Methodology: 30 Patient are randomly selected from the Red Cross hostel, Bhopal for the duration of study six months, Patient are included for this study are having no other neurological issues and Female of Middle age group. The Patient are excluded for this study are Infection positive cases are having tumor and other neurological problem. In this training six months, Functional training, Complementary exercises with electrical stimulation are implemented to incorporate the primary movement functions of the face, including the expression of emotions and other motor functions, into the patient's daily activities. **Result:** After Applying Unpaired 'T' Test, It Is found that there is no Significant difference between Group 1 (EMS AND FUNCTIONAL TRAINING ACTIVITY) AND GROUP 2 EMS AND COMPLEMENTARY EXERCISE As $P < 0.05$ I.E. $P = 0.716$. **Conclusions:** Functional training are better than Complementary exercises, when combined with electrical stimulation.

Keyword : - Facial Nerve , Functional Training, Electrical Stimulation, Complementary exercises and Electrical stimulation.

1. Introduction

When the facial nerve is affected, it can lead to weakness or paralysis on one side of the face, affecting expressions, speech, and even eating and drinking. It can be caused by various factors such as infections, trauma, tumors, or neurological disorders^[1]. It supplies and controls the muscles that lift the eyebrows, high the muscles that close the eyelids the muscles of the thick and around the mouth. To effectively address the functional limitations associated with facial paralysis, a more comprehensive approach is needed^[2]. This could involve multidisciplinary care that includes not only physical therapy but also speech therapy, psychological support, and interventions to improve social integration and quality of life. Relatively recent intervention in the reliable station

of up with facial paralysis is to develop a conscious connection between the use of certain muscles and facial emotional expression^[3]. Functional training is applied to incorporate the primary improvement functions of the face including the expression of emotions and other motor functions into the patient's daily activities. Complementary exercise with electrical stimulation was to enhance the level of activity of the facial muscles to complement the overall effort to the patient in achieving the expression of emotions and other motor functions of face^[4]. The aim of our study, the significant improvement in the patient with facial palsy by applying ES (Electronic Stimulation) and CE (Complimentary Exercises and functional training) under same conditions of chronic facial palsy diagnosis^[5].

1.1 Objective

Effectiveness of functional training and electrical stimulation in patient with facial palsy.

1.2 Methodology

- Population : Patient with facial palsy of chronic cases
- Sample size : 30 patient
- Sample design : Random sampling
- Study design : Experiment design
- Source of data : Red Cross hostel Bhopal

Inclusion criteria

- No other neurological problem
- Middle age were commonly affected
- Mostly female Patients with chronic cases

Exclusion criteria

- Infection positive cases.
- Tumor
- Other neurological problem.

Study Duration : Feb 2022 - July 2022

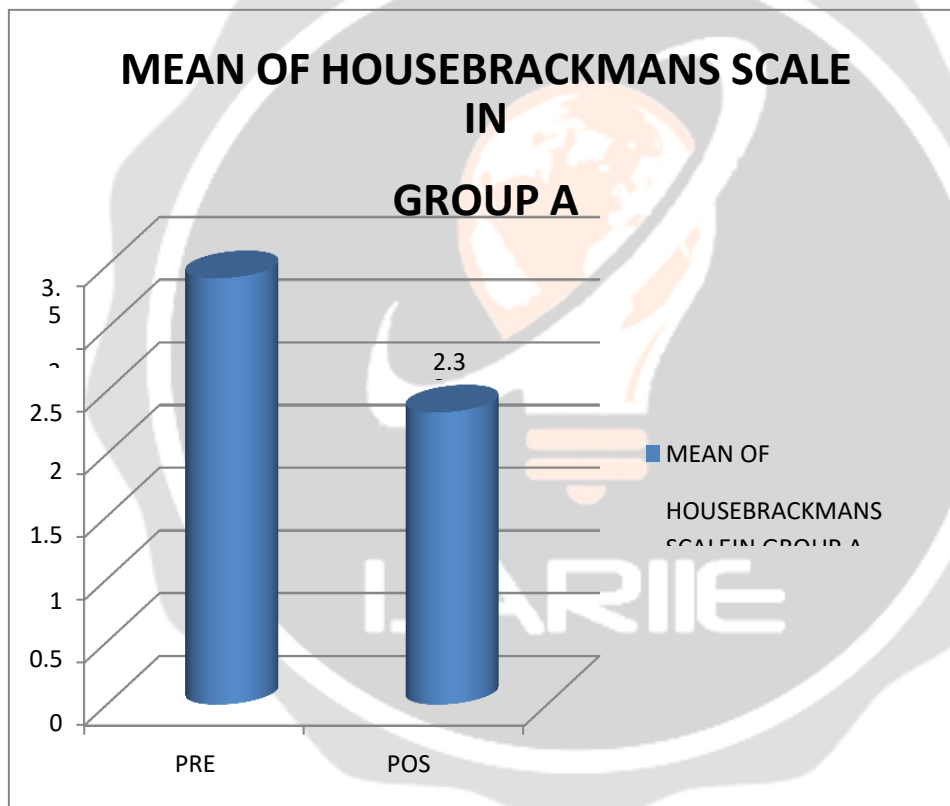
2.1 Procedure

The subject were divided in two group consisting 15 patient in each group according to the inclusion and exclusion criteria group A was given functional training and electrical stimulation while and group B was given complimentary exercises and electrical stimulation. All the subject were assessed by house brackmann scale. Before and after the study of duration. In the first Functional exercise, Patient perform the exercise of the face, Watch movies, videos, Blow a pipe, Rinse a mouth on the other side in complementary exercises, message "sh" "p," "b" and "f" with the teeth clenched; and to look down close with the eyes closed (eye closing exercises).). Electrical muscles stimulation is usually achieved by 0.1-1 ms pulses at frequencies between 30 and 100 hertz periodic type current).

3.1 Data Analysis

Table 3.2 COMPARISON OF HOUSE BREAKMANCE SCALE IN GROUP A

GROUP A	MEAN	STANDARD DEVIATION	SIGNIFICANCE Paired t test
Pre	3.4	0.50	t = 16.00
Post	2.33	0.48	p = 0.000



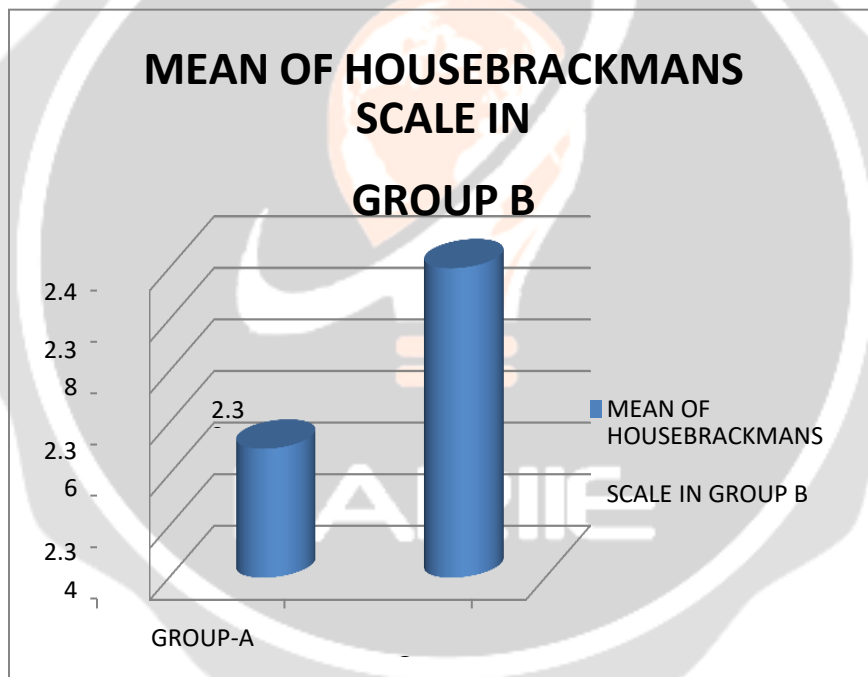
Graph :3.2 COMPARISON OF HOUSE BREAKMANCE SCALE IN GROUP A

According to the above table the mean and SD of group 1 before the treatment is 3.4 and 0.50 respectively and mean and SD of group 1 after the treatment is 2.33 and 0.48 respectively. This shows that there is improvement in facial muscles function and expression after giving electrical stimulation and functional training activity in group 1. After applying period 't' test is found that there is significant difference in group 1 as $p < 0.05$ i.e. $p = 0.000$.

Table 3.3 COMPARISON OF HOUSEBREAK MEANS SCALE IN GROUP

GROUP B	MEAN	STANDARD DEVIATION	SIGNIFICANCE
PRE	3.46	0.51	t = 16.000 p = 0.000
POST	2.4	0.50	

Graph 3.3: COMPARISON OF HOUSE BREAKMANCE SCALE IN GROUP A



According to the above table the mean and SD group one before the treatment is 3.4 and 0.51 respectively and mean and SD of group 1 after the treatment is 2.4 and 0.50 respectively these shows that there is improvement in facial muscle function and expressions after giving electrical stimulation and functional training activity in group 1 after applying beard test it is significant difference in group 1 as $p < 0.05$ i.e. $p = 0.000$.

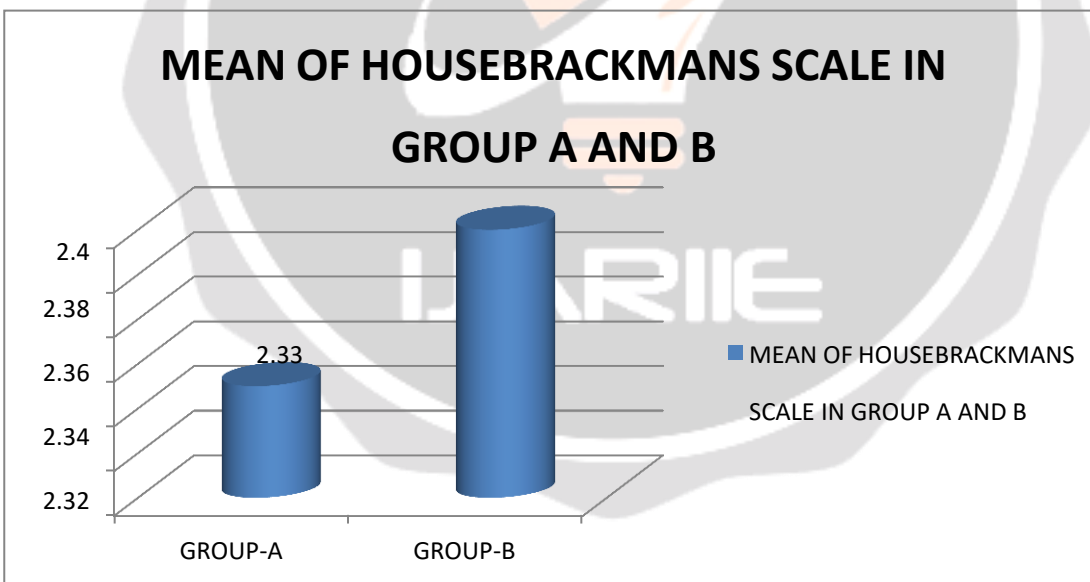
Table 3.4

GROUP B	MEAN	STANDARD DEVIATION	SIGNIFICANCE
GROUP	3.46	0.51	t = 16.000 p = 0.000
GROUP2	2.4	0.50	

3.4 COMPARISON OF HOUSEBREAK MEANS SCALE IN GROUP A AND GROUP B

According to the above table the mean and SD of group 1 (EMS and functional training activity is 2.33 and 0.48 respectively and mean and SD of group 2 (EMS AND COMPLEMENTARY EXERCISE) is 0 2.4 and 0.50 respectively.

These shows that there is improvement in facial muscle function and expression in group 1 than in group 2. After applying unpaired 't' test it is found that there is no significant difference between group 1 (EMS AND FUNCTIONAL TRAINING ACTIVITY) and group 2 EMS AND COMPLEMENTARY EXERCISE () as $p < 0.05$ i.e. $p = 0.0716$



4.1 Result:

In the present study 30 subjects were selected according to the inclusion and explosion criteria. They were divided into two groups consisting of 15 subjects in each group. Group A was given EMS and functional training activity and group B was given image and complementary exercises. The subjects related on the basis of house brakeman scale therefore before the before and after the treatment. Statistical analysis was done by pair t-test within the group and unpaired the test between the groups. Statistically significant results were seen in the intra group comparison but in the inter group comparison results were significant

the observations made were. On comparison of the means and SD of group 1 before the treatment which is 3.4 and 0.50 respectively and mean and SD of group 1 after the treatment which is 2.33 and 0.48 respectively. This shows that there is improvement in facial muscle function and expression after giving electrical stimulation and functional training activity in group group 1 after applying period 't' test it is found that there is significant difference in group1 as $p < 0.05$ i.e. $p = 0.000$.

4.2 Discussion:

The patients with chronic facial palsy who receive EMS as described in the article makes show improvements from moderately severe facial motor this function this figuring a symmetry to mild dysfunction (normal symmetry with only slight muscle weakness) at rest with slight mouth asymmetry and synkinesis during active contraction), but with little improvement in associated clinical problems (eg. synkinesis, tearing drooling)⁶. The sample size was small and because all patients in this study received EMS, the clinical improvements reported cannot with confidence be attributed to EMS⁷. The functional training component of our program encourages and provides opportunities to express context specific variables emotions with within a patients natural environment and Inverse task that facilitate other facial motor functions within that environment search is blowing Bubbles with children⁸.

Complementary exercise also might have contributed to the changes observed on the physical function sub scale of the FDI, such as improvements in the ability to drink and eat without leaking of fluid and food from the mouth and in the ability to close eyes. Thus we believe that the effects of the components of the functional treatment program senior district leading to improvements in multiple aspects of functional functions inpatients with facial paralysis there may be a gap between "capacity" (what they can do it their best) and "performance" (the execution of that activity in the real world); this gap may be mediated by the physical logical distress experienced by patient. In other words patients may underperform because of the adoption of negative coping strategies. These circumstances further worsen their condition eventually causing for the decline in their existing capacity. We hoped to narrow the gap between capacity and performance by encouraging positive coping and social interactions to deal with physiology distress and social isolation while staminate simultaneously creating more opportunities to express emotions and perform other facial motor functions.

5. CONCLUSIONS

From the above study we conclude that functional training activity is better than Complementary exercise when combined with electrical simulation.

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