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Compare the Effect of Functional Training and Complementary Exercise in Patient with Chronic Facial Palsy

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ABSTRACT

Introduction: Facial paralysis, also known as facial palsy, can indeed be a challenging condition. It occurs when there is dysfunction or damage to the facial nerve, which controls the muscles of the face. This nerve, the seventh cranial nerve, has a complex pathway from the brainstem to the facial muscles. When it's not functioning properly, it can lead to weakness or paralysis of the muscles on one side of the face, affecting expressions, blinking, and even eating and drinking. Functional training is indeed a crucial aspect of rehabilitation for facial palsy. By incorporating exercises that target the muscles involved in facial expressions and other motor functions into the patient's daily activities, it helps to promote muscle strength, coordination, and control. These exercises can range from simple facial movements like smiling, frowning, and raising eyebrows to more specialized techniques tailored to the individual's needs.

Objective: To study the effect of functional training and Complementary exercise in patient with Chronic Paralysis, 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.

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

Introduction:

Facial paralysis can indeed have a significant impact on various aspects of a person's life, including their ability to express emotions, speak, and perform daily activities like eating and drinking[1]. The facial nerve, when affected, can result in weakness or paralysis on one side of the face, affecting the muscles responsible for expressions, closing the eyelids, and controlling movements around the mouth. To address the functional limitations associated with facial paralysis effectively, a comprehensive approach is necessary[2]. This may involve multidisciplinary care, encompassing physical therapy, speech therapy, psychological support, and interventions aimed at improving social integration and quality of life. By addressing the physical, emotional, and social aspects of the condition, patients can receive holistic support and maximize their recovery potential[3]. Electrical stimulation can help enhance the activity of facial muscles, while complementary exercises and functional training focus on incorporating these improvements into the patient's everyday movements and expressions[4]. By applying both ES and CE within the same conditions of chronic facial palsy diagnosis, your study seeks to evaluate the overall impact on patients' facial function[5]. This approach suggests a comprehensive strategy for rehabilitation that not only targets specific muscle activation but also integrates these improvements into functional movements[7]. Evaluating the outcomes of such an approach can provide valuable insights into effective treatment strategies for patients with chronic facial palsy[8].

Objective:

Compare the effect of functional training and conventional therapy in patient with chronic facial palsy.

Methodology:

- Popula tion : 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

Procedure:

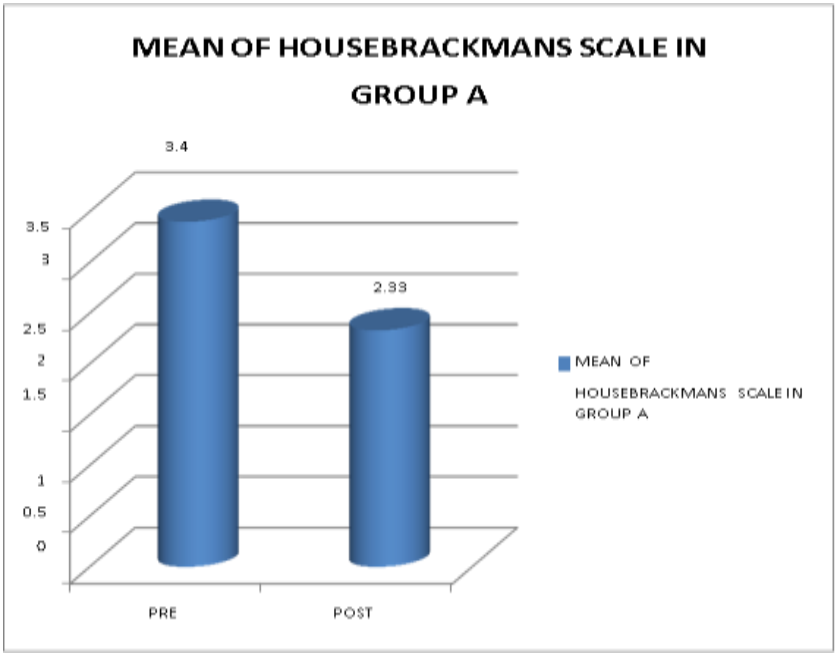
The subject were divided in two group consisting 15 patient in each group according to the inclusion and exclusion criteria group A was given functional training and electrical stimulation while and group B was given complimentary exercises and electrical stimulation. All the subject were assessed by 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).

Data Analysis:

Table : 1 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 :1 COMPARISON OF HOUSE BREAKMANCE SCALE IN GROUP A

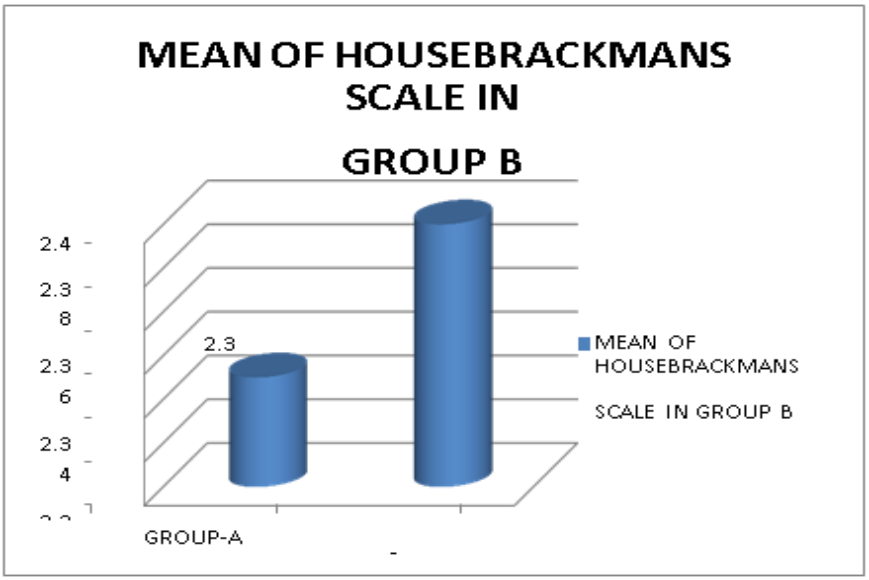


According to the above table the mean and SD of group 1 before the treatment is 3.4 and 0.50 respectively and mean and SD of group 1 after the treatment is 2.33 and 0.48 respectively. This shows that there is improvement in facial muscles function and expression after giving electrical stimulation and 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 2.2 COMPARISON OF HOUSEBREAK MEANS SCALE IN GROUP B

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

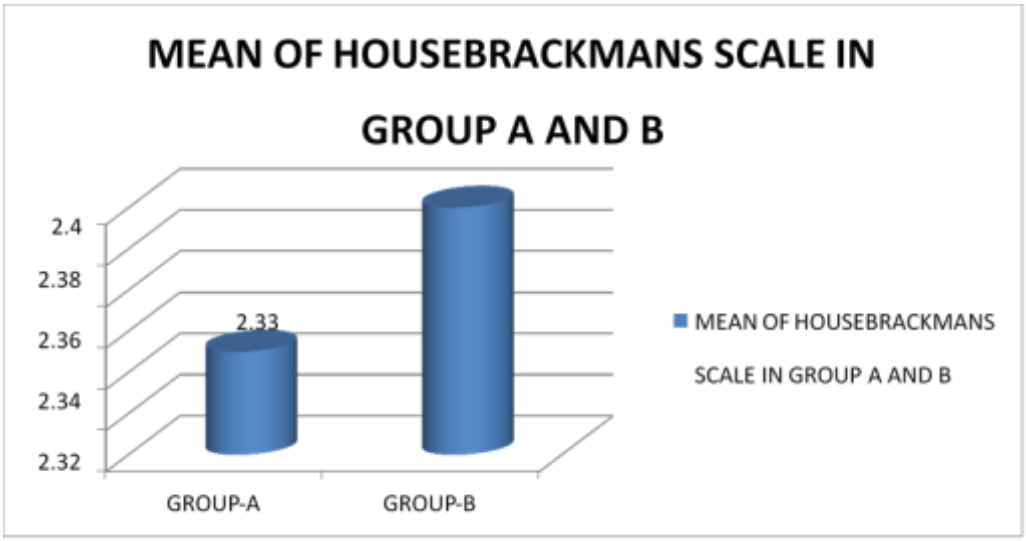
Graph 2: COMPARISON OF HOUSE BREAKMANCE SCALE IN GROUP A



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 0.5 0 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 2.3 COMPARISON OF HOUSEBREAK MEANS SCALE IN GROUP A AND GROUP B

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



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 COMPLEMENT 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. $p=0.0716$

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 0.5 0 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 group 1 as $p<0.05$ i.e. $p=0.000$.

Discussion:

The patients with chronic facial palsy who receive EMS as described in the article makes show improvements from moderately saver facial motor this function this figuring a symmetry to mild dysfunction (normal symmetry with only slide muscle weakness) at rest with slide mouth asymmetry and synkiness during active contradiction), but with little improvement in associated clinical problems (eg. synkynesis, 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 EMS[7]. 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 children[8].

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 flute 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.

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