

Recovery Time in Bell's Palsy after Physical Therapy Treatment

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ABSTRACT

Aim: To check the recovery time in Bell's palsy subjects after Physical Therapy (PT) management.

Methodology: A prospective cohort study has been conducted at NHMC Lahore with 40 diagnosed patients of Bell's palsy aged 21-40 years. Data was collected with simple random sampling technique followed by random number table. All patients having same baseline characteristics with moderate severity of symptoms on House-Brackman scale were included in study according to inclusion and exclusion criteria. Forty subjects were equally distributed in to two groups, 20 in Case group and 20 were in control group with equal ratio of male to female. After prior written permission, an interview was conducted to assemble data from subjects who were taking PT management (face muscles training, EMS and superficial heating) scheduled first, second, third, fourth, fifth and sixth week on Facial disability index (FDI) having two categories; physical and social tasks function ranging from (one-five) and (six-ten) respectively, resulting zero for complete loss of function and hundred for normal to see the recovery at its peak for prognostic purpose¹.

Results: The mean value of Facial Disability Index scale, for recovery in terms of Physical and social functions for case and control groups were 1.25 and 1.05 at end of 1st week, 1.90 and 1.20 at 2nd week, 2.40 and 1.45 at 3rd week, 3.45 and 1.50 at 4th week, 3.55 and 1.75 at 5th week, 3.65 and 1.95 at the end of 6th week respectively.

Conclusion: Physical therapy is a beneficial management protocol for Bell's palsy. Patients showed remarkable positive change on FDI scale in case group rather than control group.

Key words: Bell's palsy, FDI, recovery time, PT

INTRODUCTION

An idiopathic condition having acute nature of nerve disorder known as Bell's palsy. It causes loss of unilateral facial movement along with partial or complete paralysis². The incidence rate for this condition is 20-30 cases per 100000 annually³. Drooling, sudden excessive lacrimation, sudden weakness of face musculature of involved side, dried eyes, trouble in closing eyelids, hemifacial muscle spasm, mouth deviation to unaffected side and shallow wrinkles are the signs and symptoms of Bell's palsy³. Intervention or treatments done for Bell's palsy mainly aim at improving facial muscles power, competence of lip seal and abrasion, protection of cornea from drying and tear production⁴. Most commonly used physical therapies are face massage, taping, tapping, face exercises, conductive, radiative heating modalities. Currently, face workouts are the best remedy in relation to other treatment options⁵.

FDI scale was widely used to assess the recovery of functions in the above mentioned cases with 95% reliability. In case, getting treatment in first week, will enhance the chances for betterment up to eighty percent. If the patient is reporting in first week after the onset of Bell's palsy⁶. The betterment of Bell's palsy depends on multiple factors including, age, and severity, early medical and surgical management. In overall, PT management has been proved to be the most effective remedy for Bell's palsy cases⁷.

Literature was deficient with undefined and set patterns in context of time of recovery with PT treatment for

Bell's palsy subjects. The rationale of study was just to define the suitable time line of PT treatment for the betterment of Bell's palsy subjects which will help definitely to novice practitioners of Physiotherapy field to mark a predictive time line for recovery of their patients.

METHODOLOGY

A prospective cohort study has been conducted at NHMC Lahore with 40 diagnosed patients of Bell's palsy aged 21-40 years. Data was collected with simple random sampling technique followed by random number table. There were 20 males and 20 females. All patients having same baseline characteristics with moderate severity of symptoms on House-Brackman scale were included in study according to inclusion and exclusion criteria. Forty subjects were equally distributed in to two groups, 20 in Case group and 20 were in control group with equal ratio of male to female. After prior written permission, an interview was conducted to assemble data from subjects who were taking PT management (face muscles training, EMS and superficial heating) scheduled first, second, third, fourth, fifth and sixth week on FDI having two categories; physical and social tasks function ranging from (one-five) and (six-ten) respectively, resulting zero for complete loss of function and hundred for normal to see the recovery at its peak for prognostic purpose¹.

RESULTS

SPSS 23 was being used for variables entry with analysis. Tables with graphs were formulated to show the descriptive statistics. The age range was 21 to 40 years with mean

Received on 03-10-2020

Accepted on 13-02-2021

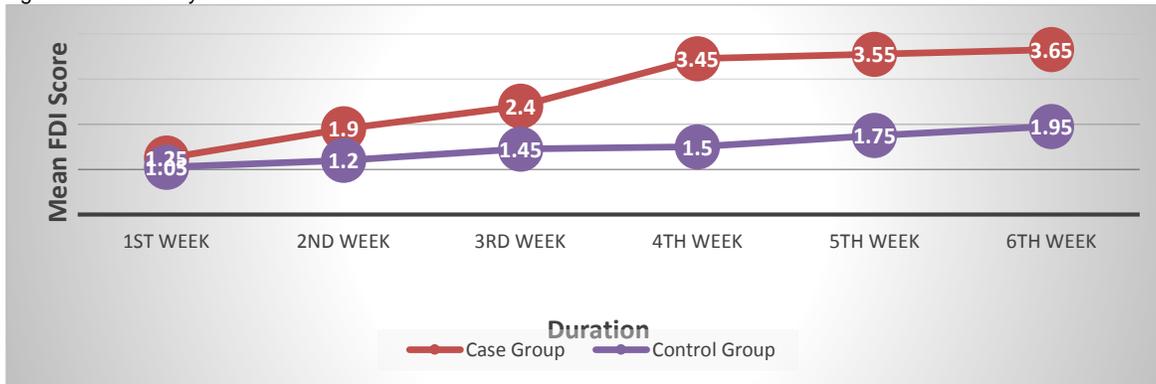
age and standard deviation 33.52, 2.42 respectively with 50 % ratio of both genders.

Description of Mean scores of Facial disability index: The mean value of Facial Disability Index scale, for recovery in terms of Physical and social functions for case and control groups were 1.25 and 1.05 at end of 1st week, 1.90 and 1.20 at 2nd week, 2.40 and 1.45 at 3rd week, 3.45 and 1.50 at 4th week, 3.55 and 1.75 at 5th week, 3.65 and 1.95 at the end of 6th week respectively.

Table

Treatment Weeks	Case Group	Control Group
1 st week	1.25	1.05
2 nd week	1.9	1.2
3 rd week	2.4	1.45
4 th week	3.45	1.5
5 th week	3.55	1.75
6 th week	3.65	1.95

Fig. Fascial disability index score



DISCUSSION

Current study was aimed to find the recovery time in the subjects undergoing PT treatment for Bell's palsy, suggesting that patients above than 40 years have been reporting commonly as compared to younger patient thus timely recovery is quite noticeable among them¹.

In the present study, all patients were by means of moderate dysfunction according to House-Brackman scale. It has been observed that the group which had undergone physical therapy treatment showed signs of recovery as compared to those who were in control group. Graeme E Glass and Kallirroi Taffeta in 2013 stated that with electrical stimulation, massage and exercise of facial muscles (physical therapy), patients will have been had a timely complete or nearly complete recovery, which has close association with our results³. Signs of remission were reported in subjects who were receiving treatment for 4 weeks and showed improved marks at FDI scale which were being supported by the results of Erik Petersen who recognized that in eighty five percent subjects, improvement was reported in three to four weeks⁵.

Erik M.D reported that first sign of remission was noticed in the first four weeks as in current study about 70% symptoms were settled down and remission was noted too in 1st four weeks⁵. In a study done by Alakram P et al in 2011, result showed that physical therapy treatment comprising of electrical stimulation, massage and exercise of facial muscles improved the symptoms in 2 weeks treatment on average as noted in this study⁴. Recommendations for future studies are studies should be done with larger sample size with longer follow ups. New

studies taken up by using the same interventional techniques and parameters for other conditions.

CONCLUSION

Physical therapy is a beneficial management protocol for Bell's palsy. Patients showed remarkable positive change on FDI scale in case group rather than control group.

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