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Following the Effect of Kinesitherapeutic Programme in N. Facialis Paralysis – Case Report

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Abstract

N.facialis paralysis is a common mononeuritis. The facial nerve injury can result from inflammation (neuritis) or other causes (neuropathy) - intoxications, tumors, and trauma. The application of a kinesitherapeuticprogramme is especially important for the restoration of the mimic muscles. We recorded the effectiveness of the programmeperformed for 30 days on a 58 year old female patient. The procedures included relaxing neck massage, sumption and irradiation of excitement, stretching reflex, electrostimulation, passive and active exercises, treatment position, articulation exercises and training the patient to perform selective movements through visual control. As a result of the applied physical therapy, there was achieved an almost complete recovery of the injured right side of the face.

Keywords: paralysis, n. facialis, kinesitherapeuticprogramme.

Introduction

Bell's palsy, which is synonymous with neuritis n. facialis, is a common mononeuritis. Approximately one person in a thousand experiences symptoms of this inflammationat least once in their lives.

The incidence of the disease is higher in the elderly, while both sexes are equally affected.Neuritis of the right facial nerve is reported to have greater incidence than that of the left one - 65% and that 10% of patients relapse. Neuritis of the facial nerve is primary or secondary.

Etiologically speaiking, what is taken into account are the following: shingles, chickenpox, polio viruses, the common cold is also a crucial factor. Some anatomical abnormalities also have a place in the etiology, such as congenital narrowing of the canalis n. facialis with consequent nerve ischemia, tumors, multiple sclerosis (Manolov et al., 2008).

The diagnosis of the injury is normally done by X-ray, CT, MRI, CSF examination and EMG. The disease can be prolonged depending on the extent of the injury and lasts from 2-3 to 7-8 weeks or more. Full recovery is not achieved in 20% of cases. The treatment includes anti-edema and anti-inflammatory drugs, steroids and vitamins of group "B".
Physical therapy and kinesitherapy are particularly important in the overall treatment plan (Kostadinov, 1985).

Purpose of the Study

The study aims to track the effectiveness of akinesitherapeutic program administered to a patient with paralysis n. facialis.

Case Report

We are presenting the case of a 58 year old female patient with paralysis n. facialis of the right side asa result of cold irritation.The case history was takenbased on data obtained from the patient. As comorbidities the patient reported bilateral arthrosis and osteoporosis.

Kinesitherapywas performed at home and continued for thirty days. Testing the muscles of the injured part was done with the help ofBankovtest (Bankov, 2011),promoting stabilisation of the healthy side.

Results and Discussion

Table 1: initial and final results of the testing of facial muscles testing

	Beginning		End	
Muscles	**dex**	**sin**	**dex**	**sin**
m. frontalis	zero	normal	normal	normal
m. corrugatorsupercilii	zero	normal	normal	normal
m. orbicularisoculi	zero	normal	normal	normal
m. procerius	следа	normal	normal	normal
m. nasalis	следа	normal	normal	normal
m. zigomaticusmajor	zero	normal	weak	normal
m.orbicularisoris m.orbicularisoris	zero	normal	weak	normal
m. levatoranglusoris	zero	normal	weak	normal
m. depressor anglusoris	zero	normal	weak	normal
m. quadratuslabii inferior et superior	zero	normal	weak	normal
m. biccinator	trace	normal	weak	normal
m. mentalis	trace	normal	weak	normal
m.platysma	trace	normal	normal	normal

It is clear from Table 1 that a partial recovery of facial muscles on the right wasachieved by first regained full range of motion muscles of the upper arm. Muscles that are more distant from the foramen stylomastoideus, in which the facial nerve leaves the skull, were still weak and the movement was not complete.

In the phase of absent movements, our task was limited to the prevention of contractures, improvement of the trophic and stimulating nerve regeneration as well as to prevention ofsynkinesis. The kinesitherapeutic program debuted with a relaxing neck massage from seat position with upper limbs placed on the back of the chair, head resting on forearms. With this position we aimed to relax the muscles of the upper body (Boisson et al,2011). The duration of the neck massage was 15 minutes.

Facial muscles exerciseswere performed fromoccipital leg starting position. The pillow was placed lower in order to obtain a relaxing effect on the musculature (Millogo et al 1997).We showed the patient the movement she needed to perform. Then we stabilized the healthy side by initiatingexercises of proximal muscle groups. We appliedsumption and irradiation of excitement by irritation in the direction of muscle movement,by stretch back to the direction of movement and then we performed passive motion, being careful not to cause synkinesis. Non-synkinesis is particularly important in the recovery of active movements because it causes contractures andthere is a danger of creating a permanent asymmetry of the facial muscles (Chevalier, 1990).

We applied treatment of plaster situation as we held thelipcornerlifted and trained the patient in performing manual correction consisting in maintaining paresthetic musculature with her hand.

We applied electrostimulation for five minutes of three muscles -m.frontalis, m. zigomaticus and m. mentalis. We also applied mild moderate heat in order to improvethe trophic (Gatignol, et al., 2011). We instructed the patient not to sleep on the injured sideso that she would not overstretchthe paresthetic muscles.

At the onset of active movements we worked again analytically for each of the muscles by applying 5-10 clean cuts starting from the proximal,so that in case ofsynkinesiswe could finish the movement passively. After each exercise on a certain muscles, weperformed gentle caress (Barakovaq 2008).

We included articulation exercise by saying the "a", "e", "o", "y" and words such as "ma-ma", "ra-ma" in order to improve articulation and restore movement of the distal muscle groups that lagged in the recovery process (Laure et al., 2009)

We avoided polypragmasy. We took extra care in choosing the correct dosage of massage and kinesitherapy, lesta possible irradiation of irritation and the appearance of complications (contractures and synkinesis) would have emerged (de Chavigny, 2009).At the end of the recovery period, we introduced seat exercises and trained the patient to perform selective movements in front of a mirror.

Conclusion

The appliedkinesitherapeutic program proved effective in the recovery of injured muscles movements, as well as in theimprovement of the trophic of the face. The psycho-emotional state of the patient was affected, whowas extremely depressed in the beginning as a result of the injury. With the advancement of kinesitherapy and gradual recovery in the volume of movements of the facial muscles the assistance of the patient significantly improved and at a later stage and the hope of a favorable treatment outcome.

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