CASE REPORT

THE REHABILITATION OF A HEMIPLEGIC PATIENT

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ABSTRACT:
Hemiplegia is complete paralysis of the arm, leg, and trunk. There is a loss of motor control that put a stop to the patient from precisely controlling the timing and intensity of muscle action. It is usually thought that hemiplegia is a disability and cannot be treated.

We report the case report of a 60 year old male patient who was admitted in the Male Medical Unit (MMU 111) of Fatima Hospital of Baqai Medical University, with the complain of right sided hemiplegia (left CVA). The success of Physiotherapy was found to be considerably high. The shorter the period between the onset of paralysis and the beginning of rehabilitation, the greater the improvement to the patient. As in this case, we started the rehabilitation program early on, that resulted in maximum attainment of functional status.

KEY WORDS: Apraxia, motor control, Slurred Speech, Eccentric, Concentric

INTRODUCTION

Cerebrovascular accidents (CVAs) are one of the life threatening neurological diseases, resulting in loss of normal motor control i.e. the precise and coordinated action of muscles. They occupy third place after heart disease and cancer as a source of death and first place as a cause of morbidity. The frequency of this illness is steadily increasing, along with the extension of the average life expectancy of patients who suffer from CVA, 10% recover spontaneously within the first month. Many patients with hemiplegia can be rehabilitated. The objective in the rehabilitation of stroke patient is to have the patient reach a maximal functional capacity in the shortest possible time and to achieve as independent and productive condition as possible. On the other hand, rehabilitation programs for stroke patients demand a long period of hospitalization and expensive health management. This case was considered with the objective of determining hospitalization periods and the functional and ambulation levels upon admittance and discharge of the hemiplegic patient admitted for rehabilitation.

CASE SUMMARY:
A 60 year old male patient was admitted in the Male Medical Unit (MMU 111) of Fatima Hospital of Baqai Medical University, Gadap Road Karachi, with the complain of right sided hemiplegia (CVA,), associated with apraxia, numbness and slurred speech and history of 8 years hypertension for which he had been taking medicine and no other active complain. Neurological examination at admission showed a right motor deficit involving his right arm and hand and predominantly his right leg and foot. His face was unaffected. He did not have any significant past surgical illness. All his family members are well with no history of hypertension and stroke.

Three years back he had multiple attacks of CVA. Firstly he was functionally active but after some time of attacks he was unable to move. On general physical examination an old age male of normal height and built, cooperative and well oriented.
At the time of admission his routine investigations were as follows:

- Anaemia: + ve
- Jaundice: – ve
- Edema: – ve
- Lymph nodes not palpable
- Typhoid: – ve

**CVS**

- Palpitation: + ve
- Headache: – ve
- Vertigo: + ve
- Weakness: + ve

**Urinary System**

- UTI: + ve
- Dripping: + ve
- Frequency: 4times /day
- Urgency: + ve

**RADIOLOGICAL INVESTIGATION**

C.T scan showed multiple high intensity signals, and impressions of cerebral haemorrhage as the patient had a history of recurrent cerebrovascular accidents in the past.

**NEUROLOGICAL EXAMINATION:**

### UPPER LIMB

<table>
<thead>
<tr>
<th>Upper limb</th>
<th>Right</th>
<th>Left</th>
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<tbody>
<tr>
<td>Tone</td>
<td>Reduced</td>
<td>Normal</td>
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<tr>
<td>Power</td>
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<td>Reflexes</td>
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<td>Muscle bulk</td>
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### LOWER LIMB

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<tr>
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<tbody>
<tr>
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**MANUAL MUSCLE TESTING:**

Muscle testing is used in various practices as a means to diagnose, health strengths and weaknesses prior to treatment.  

**Upper limb (Right)**

- Shoulder Horizontal Abduction = Posterior Deltoid = 2/5
- Shoulder flexion = Anterior deltoid = 2/5
- Shoulder Horizontal Adduction = Pectoralis major = 2/5
- Shoulder External Rotation = Infraspinatus and Teres minor = 1/5
- Shoulder Internal Rotation = Subscapularis = 2/5
- Elbow flexion = Biceps brachii muscle = 3/5
- Elbow extensor = Triceps muscle = 2/5

**Upper limb (left)**

- Shoulder Horizontal Abduction = Posterior Deltoid = Normal (5/5)
- Shoulder Horizontal Adduction = Pectoralis major = Normal
- Shoulder External Rotation = Infraspinatus and Teres minor = Normal
- Shoulder Internal Rotation = Subscapularis = Normal
- Elbow flexion = Biceps brachii muscle = Normal
- Elbow extensor = Triceps muscle = Normal

**MANUAL MUSCLE TESTING:**

**Lower Limb (Right)**

- Quadriceps = 2/5
- Hamstring = 2/5
- Tibialis anterior = 1/5
- Gastrocnemius = 2/5
- Hip adductors = 3/5
- Hip abductors (gluteus medius/minimus) = 2/5
- Gluteus maximus = 2/5

**Lower Limb (Left)**

- Quadriceps = Normal (5/5)
- Hamstring = Normal
- Tibialis anterior = Normal
- Gastrocnemius = Normal
- Hip adductors = Normal
- Hip abductors (gluteus medius/minimus) = Normal
- Gluteus maximus = Normal

**MANAGEMENT:**

The total period of stay of the patient in the hospital was 25 days. During the period the patient stayed in the hospital he was given physiotherapy treatment including range of motion (ROM), strength and endurance activities(eccentric & concentric activity),
bimanual activities (use of two hand doing the same thing, two hand working cooperatively at different point in range, to gain proximal stability and to use it as a form of force. Speed and coordination activities (unimanual and bimanual activities) and walking exercises. Functional tasks were given to improve activities of daily living.

Participation in the active rehabilitation programme, showed motor and functional development.

DISCUSSION:
Hemiplegia developing after CVA is one of the most significant causes of disability. The rehabilitation of hemiplegia is the prevention of its secondary complications and treated along these lines, the patient reaches a self-regulating functional stage in a short period of time. In the end, it reduces the social and financial burden on society. A hemiplegic rehabilitation comprises one of the most important areas of physiotherapy treatment. The aim of this case study was to determine and discuss the fact that whether or not there is an improvement in the recovery level of the hemiplegic patient who entered our rehabilitation program.

Our hemiplegic patient showed a significant improvement in his daily life activities and in his ambulation levels, at the end of the hospitalization period. This case study shows the importance of a suitable rehabilitation program for the rehabilitation of the patient from the functional and motor aspects and for independent ambulation.

CONCLUSION:
The effectiveness of rehabilitation was found to be significantly high. The shorter the period between the onset of paralysis and the start of rehabilitation training, the greater the advantage to the patient. As In this case, we started the rehabilitation program early on, that resulted in maximum achievement of functional mobility.
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REFERENCES:


