

Cerebral Stroke, Hemiplegy, Recovery and Rehabilitation during the Period 2004-2014, QSUT

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I. INTRODUCTION

Cerebral stroke is, as defined by the World Health Organization, a syndrome of vascular origin, characterized by the unforeseen beginning of focal neurological deficit or dissolved with duration of more than 24 hours, which may be the deadliest. Transient ischemic attack or TIA is defined as a focal neurological deficit with symptoms and signs of less than 24 hours, which comes from a focal cerebral ischemia or hemorrhage. These last two inter alia also cause cerebral palsy which constitutes a broad specialty in medicine. In addition to many other complications it covers also paralysis of upper limb, lower limbs and trunk. Because of its width, the specialty of neurological diseases is divided in specific paralysis specialties such as:

1. Hemiplegy: It's a motor defect that affects half of the body (the counter-lateral cerebral part). Alterations are of spastic type, existing in the upper limb.
2. Double Hemiplegy: This is a type of bilateral hemiplegy of spastic type, particularly affecting the upper limbs.
3. Paraplegia: Motor deficit localized only to the inferior extremities and is always bilateral. Usually there are observed small motor defects in the upper limbs. The form of paralysis, which is verified, it may be both in a spastic or rigid form.
4. Monoplegia: This form is characterized by loss of movement of a single limb which is very rare, because usually it is a hemiplegy or dyplegia in which the limb at first glance does not seem impaired, but that retains a special functional activity.
5. Tetraplegia: The most frequent and more severe form. Motor lesions affect the four limbs with rigid type deficit and a minor frequency which may be of spastic type.

II. ABSTRACT

Objective: This paper reports assessment of the prevalence and determinants of hemiplegy in the adult population over 18 years old in the time period 2004-2014.

Design: Hemiplegy conducted in time period 2004-2014.

The Setting: Neurology, Tirana City

Subjects: 4661 adults over 18 years old and above

Results: The overall prevalence of hemiplegy was determined 58.57% males and 41.42% females. Hemiplegy affects both sexes. The age group most affected is the 60-80 year old **Conclusions:** Hemiplegy represents a great health and socioeconomic problem. Higher prevalence of hemiplegy

associated with measuring risk factors like disease and diabetes, arteriosclerosis.

Key words: Hemiplegy, QSUT, male sex,

III. DEFINITION

Hemiplegia is loss of voluntary movements of half of the body, caused by any kind of lesion of the pyramidal system (hemorrhage, thrombosis, embolism) or a psychogenic mechanism by cranial trauma, thus an injury of the right cerebral hemisphere will cause problems to left half (left hemiplegy) and vice versa when the damage is in the left hemisphere will bring changes in the right half of the body (right hemiplegia), thus by progression of particular pyramidal ways, motor deficit is almost always noticed on the opposite side of the lesion. Therefore, Hemiplegy is a hemistatic motor disorder that results from damage in the main motor way, in central level of motoneuron, often accompanied by sensitivity concerns.

IV. ETIOLOGY

Epidemiological studies on the extent of acute cerebral vascular disease show that in 85% of cases stroke is on ischemic basis and in the remainder of 15% it is on hemorrhagic basis. Ischemic cerebral stroke has etiopathogenetic mechanisms, more or less common, but more frequent are both cardio-embolism and arterial thrombosis.

Cerebral haemorrhages are due, in most cases, to the abnormalities of the vascular system. The type of anomalies vary with age: under 40 years arteriovenous malformations and microorganisms are the most common cause of cerebral haemorrhages, while from 40 to 70 more frequent lesions are deep haemorrhages which come due to rupture of small penetrating arteries; in older patients it is possible to have haemorrhage in white substance (lobar hemorrhage) which is due to amyloid angiopathy. It should be noted that the most frequent cause of hemiplegy is the cerebral stroke which can cause problems in movement, being dependent from the area of the lesion. Hemiplegy is common to happen when it is hit corticospinal tract; another cause is the cranial trauma, Intoxication (uremia, diabetes, etc.), brain infections, tumors, which are typical of progressive paralysis.

V. CLINICAL OVERVIEW

Signs and symptoms are manifested unexpectedly or gradually, stages of hemiplegy development are essentially two: Signs which primary characterize hemiplegy consist of:

- Acute phase in which prevails a flaccid paralysis and lasts for an average of 2 to 6 weeks
- Sub-acute phase, in which prevails the spastic paralysis. At this stage we can have reactions and is possible a functional motor recovery.

Secondary signs characterizing hemiplegy:

- Deficit of forces with motor unity problems.
- Spasticity with hyper reflex associated with pathological schemes of inferior limbs and flexion in upper limbs.
- Appearance of primitive reflexes

The tertiary sign that characterizes hemiplegy is as follows:

- Hemiplegy can cause other complications such as wounds from decubitus, muscle and tendon retraction, muscular hypostonia.

Associated concerns:

- Sensitive: A change of superficial and profound sensibility.
- Increased muscle rigidity not only from neurological responses to withdrawal, but also because of muscle cuts and increase of passive stiffness.
- Deficit of superior cortical functions (aphasia, apraxia, neglect, anosognosia)

VI. TREATMENT

Dedicated physiotherapy treatments to patients with hemiplegy intend to reconsider the functionality of the affected but above all to make it possible for the patient to be much more autonomous during the activities of everyday life. Hemiplegic rehabilitation deals with the rehabilitation of a patient who has or had damage to the peripheral or central nervous system. The most frequent problems related to alterations of balance and movement, inability to walk, loss of functional independence.

Various techniques can be used during physiotherapy treatment:

- Bobath Method
- Kabat Method
- Perfetti Method
- Grimaldi Method

All these methods of rehabilitative treatment have targeted to return to patient the functionality of the damaged part and autonomy in activities of daily life.

Other treatments that may be attached consist of:

- Physical therapy: these are instrumental type treatments that aim to reach optimum results of analgesic type, anti-inflammatory and nervous stimulus, through electrical, mechanical or thermal type energy.
- Manual therapy: which is used most of all to treat the mechanic damage or dysfunction, functional changes that may hit every muscle and is characterized by a total or partial limitation of mobility of other muscles below them.

VII. SCOPE

- ❖ Recognition of cerebral stroke and hemiplegy, frequency and therapeutic methods applied in QSUT

- ❖ Define hemiplegy report cases by sex and age groups
- ❖ Identify groups in risk of hemiplegy
- ❖ Draw up recommendations and conclusions which may affect the improvement of the quality of life of the population as a whole.
- ❖ Increase knowledge for prevention of treatment and physiotherapeutic care in patients with hemiplegy.
- ❖ Health education in relation to lifestyle and care after leaving the hospital premises.

VIII. MATERIAL AND METHOD

- ❖ Type of study is transversal and cross-sectional
- ❖ The time of study covers the period 2004-2014
- ❖ Place of study is the neurology pavilion at University Hospital Center, QSUT
- ❖ Data collection is done by attending patients day after day by doctors and physiotherapists as well as receiving data from the patient's medical records in statistics
- ❖ The statistical data of 4661 hospitalized patients in the Neurology department for the years 2004-2014, out of which 379 patients have been added with hemiplegy and their division depending on the age group and gender.
- ❖ The subjects involved are 4661 adult patients 18 - 100 years of age.

IX. RESULTS

In the last fifteen years, Hemiplegy, a form of cerebral palsy, caused by cranial trauma as well as from a number of diseases, which has previously shown a low clinical interest, today has become the object of attention, thanks to the evolution that has occurred gradually in the field Neurosciences, which has given an impetus to rehabilitation treatments. Development of this theme aims to increase knowledge about the prevention, treatment and physiotherapeutic care for hemiplegy, also illustrated by valutive and new therapeutic files, hoping to distribute and to put them to use in Albania, with the sole purpose to achieve higher rehabilitation results for persons suffering with hemiplegy. The experimental part is based on an "epidemiological investigation of Hemiplegy" in the service department of Physiotherapy at the University Hospital of Tirana "Mother Teresa", over the last decade from 2004 to 2014 also compared to international scientific literature on hemiplegy. Upon the analysis of achieved results and comparing the similar results obtained by foreign authors, we draw the following conclusions:

The prevalence of hemiplegy is a major health and socio-economic problem.

From a total of 4661 patients hospitalized with cerebral stroke diagnosis caused by ischemia, or cerebral haemorrhage, it was found that the prevalence is higher among male sex with 2,831 cases compared to women in 1830 cases, of which patients diagnosed with hemiplegy are 379 where again we see that the prevalence is higher in males 222 cases, and females 157 cases.

Our study also shows that the affected age group is 60-80 years old.

With the age growth, it is increased also the prevalence of cerebral insults of neurological injuries.

One of the most important factors for disease management is also modification of one's lifestyle.

DISCUSSION

In our study were included a total of 4461 patients aged 18 - 100 years. They were assessed in relation to the presence of hemiplegy, its prevalence associated with age and gender, the correlation that exists between age and disease, the predominance of the male sex as compared to female sex. Their age ranges from 18 years old up to the age of 100 years, finding that the most affected age group was 60-80 years old.

Keywords: Cerebral stroke, Hemiplegy, QSUT, male sex.

X. CONCLUSIONS

- Now it is the time for a special rehabilitator's figure, so far masked by uncertainty of certain and simply executive tasks, which, with proper preparation is able to create a treatment plan autonomously. Then, you should abstain from older models, and always remember that patient is the only rehabilitation center. Many international studies have allowed renewing the way that the physiotherapist considers hemiplegy. New lessons have brought about renovated evaluative approaches and rehabilitation therapies; this is the best context to pursue the goal of rehabilitation in hemiplegy. Hemiplegy is the loss of voluntary movements of half of the body, caused by any kind of lesion of the pyramid system (haemorrhage, thrombosis, and embolism) or of a psychogen mechanism, also from cranial trauma.-Use of therapeutic treatments has resulted in the reduction of physical and motor disability and in the life improvement of patients suffering from hemiplegy. Management of hemiplegy has significantly improved in the last years. -In patients taken in the hemiplegy study review male sex prevails. - The most affected age group in the study sample is 70-80 years old. - The importance of changes to be performed in the lifestyle to be properly adapted to the disease.

XI. SUGGESTIONS

1. Promoting a positive lifestyle, including the elimination of risk factors through exercise of tobacco or alcohol addictions elimination, keeping of normal weight and management of risk factors such as diabetes or arteriosclerosis.

2. Information campaigns should be undertaken primarily of students of physiotherapy and medicine about the disease,

etiology, early diagnosis, management ways and complications in cases of negligence of treatment protocols.

3. Extensive work should be done towards giving proper information especially by the health practitioner. This information must be constant during visits carries out by patients in health institutions.

4. Also a great work must be done by the press and the visual media by organizing informative programs suitable for increasing the awareness and the importance of continuous controls.

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