ORIGINAL RESEARCH PAPER

MEDICAL SCIENCE

QUALITY OF LIFE AMONG STROKE PATIENTS ADMITTED IN A TERTIARY CARE HOSPITAL

KEY WORDS: Stroke, Morbidity profile, Quality of life.

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ABSTRACT

Stroke is defined by its abrupt onset of a neurologic deficit that is attributable to a focal vascular lesion1. Hypertension, tobacco use, alcohol intake, unhealthy diet, and physical inactivity are common risk factors for stroke2. Stroke patients may be left with disability which affects their quality of life. This study aims to profile the morbidity of stroke patients admitted in a tertiary hospital, the prevailing risk factors and their quality of life. **METHODOLOGY:** A hospital based cross sectional study was conducted among 40 stroke using Stroke Specific Quality Of Life Scale (SS-QOL). **RESULT:** Of the 40 patients, 20% are females and 80% are males. Family role is severely affected among male patients (mean 1.2) and social roles are the most affected among females (mean 1.3). In motor functions, Upper extremity functions is severely affected (mean 1.2).Under higher functions, language is severely affected (mean score 3.5). **CONCLUSION:** Males are more affected. Hypertension, personality, smoking and alcohol are the common risk factors. The quality of life is severely affected.

INTRODUCTION

WHO defined stroke as "rapidly developed clinical signs of focal disturbance of cerebral function; lasting more than 24 hours or leading to death , with no apparent cause other than vascular origin"[3]. Stroke also known as cerebrovascular accident(CVA) remain a leading cause of death from Non Communicable Diseases(NCD). In 2008 it is estimated that CVA accounted for 6.1 million deaths worldwide , equivalent to 10.8 per cent of all deaths [4].

Stroke is one of the leading causes of death and disability in India. The estimated adjusted prevalence rate of stroke range, 84-262/100,000 in urban areas. The incidence rate is 119-145/100,000 based on the recent population based studies [5]. The government of India 's National Programme for Prevention and Control of Cancer, Diabetes, Cardiovascular Diseases & Stroke (NPCDCS)[6] is focusing on early diagnosis, management, infrastructure, public awareness and capacity building at different levels of health care for all the NCDs including stroke. There are two main types of stroke:Ischemic and Hemorrhagic. There are multiple risk factors, non -modifiable and modifiable risk factors.

Non-modifiable risk factors:

Age: The chance of having a stroke approximately doubles for each decade of life after age 55[7].**Gender:** The incidence rates are higher in males than females at all ages [8]. But stroke kills more women than men. **Previous vascular event** such as Myocardial Infarction, peripheral vascular diseases. **Heredity**: Stroke is not hereditary, but Some of the risk factors may be hereditary such as high blood pressure, diabetes etc.,

Modifiable risk factors:

Blood pressure: High **BP** increases the risk of stroke.**Cigarette smoking**: The Chemicals cause an increase risk of stroke[9]. **Hyperlipidemia**: High cholesterol in the arteries can block normal flow to the brain , **Diabetes mellitus**: It is an independent risk factor for stroke. **Excessive alcohol intake**: Drinking too much alcohol can raise blood pressure and triglycerides levels. **Drugs** : Oral Contraceptive Pills and Hormonal Replacement Therapy[10] . **Physical inactivity and obesity:** Being inactive, obese or both can increase the risk of stroke. **Personality**: The high levels of stress often experienced by Type A personalities can lead to a stroke.

Patients with stroke suffer from weakness [unilateral weakness, upper motor neuron weakness of the face (facial palsy), motor and sensory losses in affected parts, speech disturbance [dysphasia, dysarthria][11], visual deficit , ataxia may be associated with diplopia and vertigo, head ache, urinary incontinence, seizure, coma etc.
Stroke patients are at highest risk of death in the first week after the event. Patients who survive may be left with no disability or with mild, moderate or severe disability. Many surviving stroke patients will often depend on other people's continuous support to live. The quality of life of stroke patients is severely affected.
The Quality of life of stroke patients includes their social (social roles) and psychological well being (mood & personality), motor functions (mobility, upper extremity functions), higher functions (thinking, language, vision)[12]. Stroke puts severe stress on social relationships. Social roles are altered radically when patients can no longer work and stressed by the newly dependent status of the patient.[13]

AIM:

1. To determine the morbidity profile of stroke patients admitted in Tirunelveli Medical College Hospital .
2. To assess the impact of the illness on the quality of life among these patients.

MATERIALS AND METHOD

Study design: Hospital based Cross sectional study
Study population: 40 stroke patients admitted in TVMCH and who consent during the Study period of 2 months

Study tool:

General demographic details and prevailing risk factors shall be obtained from the patients using a proforma designed for the purpose. The type of stroke is noted by the help of CT imaging report. The quality of the life shall be assessed using Stroke Specific Quality Of Life Scale (SS-QOL)." This questionnaire consists of 12 areas with 48 questions divided into 3 major Quality of Life domains: (a) Psychosocial well-being (b) Motor functions (c) Higher functions.Each Question in the questionnaire is divided into 5 choices of responses as given :

Total help - Couldn't do it at all - Strongly agree 1
A lot of help - A lot of trouble - Moderately agree 2
Some help - Some trouble - Neither agree nor disagree 3
A little help - A little trouble - Moderately disagree 4
No help need - No trouble at all - Strongly disagree 5

The mean value is calculated for each question. Study analysis is done using SPSS software.

The study is conducted after obtaining approval from the Institutional Ethical Committee. Informed consent obtained from the study

RESULT:

SOCIO DEMOGRAPHIC DETAILS: Out of the 40 patients, 20% are females and 80% are males making a sex ratio 1:4. Among males, majority falls in age group 50-60 yrs and among females, majority falls in age group 40-49 yrs (Table 1). 90% of them belong to upper lower socioeconomic class and 10% of them belongs to lower middle class. Among the stroke patients 77.5% have ischemic (males 83.9% and females 16.1%) and 22.5% have hemorrhagic stroke (males 66.7% and females 33.3%).

TABLE: 1 - SEX AND AGE DISTRIBUTION

AGE IN YRS	MALES		FEMALES	
	NO.	%	NO.	%
<40	2	6.25%	0	0
41-49	6	18.75%	4	50%
50-59	11	34.38%	2	25%
60-69	5	15.62%	2	25%
70-80	5	15.62%	0	0
>80	3	9.38%	0	0
TOTAL	32	100%	8	100%

RISK FACTORS: Among male stroke patients , the existing risk factors are - smoking 87.5%, alcohol intake 84.38%, personality type A 75%, hypertension 71.87% and among female stroke patients, the existing risk factors are – hypertension 87.5%, hyperlipidemia 87.5%. Among women, none of them took OCPs and Hormonal Replacement Therapy. Other risk factors include hyperlipidemia (males 50% and females 87.5%), heart disease (males 28.13% and females 12.5%) and diabetes mellitus (males 53.12% and females 50%).

QUALITY OF LIFE:

Psychosocial Domain: Under this domain family roles, mood, personality, social roles are considered (Table 2). family role is severely affected among males (mean=1.2) and social roles are the most affected among females (mean=1.3). Personality is least affected in both sex. Both men and women lost interest with people with the mean score of 1.8.

Motor Functions: Energy, mobility, self-care, upper extremity functions, work productivity are considered (Table-3).Upper extremity functions is severely affected in both sex- male (mean score 1.3) and female (mean score 1.4).Mobility is least affected in both sex.

Higher Functions:Language, vision and thinking are considered (Table 4). Language is severely affected in both sex- male (mean score 3.6) and female (mean score 3.4). Among females, vision is least affected (mean score=4.9) and in males thinking is least affected (mean score=4.8).

I	PSYCHOSOCIAL DOMAIN	MALE	FEMALE
A	**FAMILY ROLES**		
1	Involvement in family activities	1.18	1.5
2	Felt to be a burden	1.25	1.5
3	Health interference with personal life	1.18	1.5
	Mean Score	**1.2**	**1.5**
B	**MOOD**		
1	Feeling of discouragement	1.56	1.62
2	Loss of interest with people	1.84	1.87
3	Feeling of loneliness	1.87	1.75
4	Lack of confidence	1.65	1.5
5	Lack of interest in food	2.46	1.62
	Mean Score	**1.9**	**1.3**
C	**PERSONALITY**		
1	Irritable	1.71	2
2	inpatient	2.43	2.62
3	change in personality	2.40	2.75
	Mean Score	**2.2**	**2.5**
D	**SOCIAL ROLES**		
1	Social interaction	1.46	1.12
2	Lack of ability to do hobbies	1.59	1.5
3	Infrequent meeting with friends	1.56	1.5
4	Lack of sex	1	1.25
5	Interference with social life		1.15
	Mean Score		**1.4**
II.	**MOTOR FUNCTIONS**		
A	**ENERGY**		
1	Tiredness	1.46	1.37
2	I had to stop and rest during the day	1.75	1.5
3	I is too tired to do what I wanted to do	1.65	1.5
	Mean Score	**1.6**	**1.5**
B	**MOBILITY**		
1	Difficulty in walking	2.18	2.62
2	Loss of balance	2.15	2.5
3	Difficulty in climbing	2	2.37
4	Need of rest during walking/getting up from chair	2.5	2.87
5	Difficulty in standing	2.9	3.12
6	Did you have trouble getting out of a chair?	2.68	3
	Mean Score	**2.3**	**3.3**
C	**SELF CARE**		
1	Did you need help preparing food?	1.18	1.37
2	Did you need help eating?	2.37	1.75
3	Did you need help getting dressed?	1.9O	1.5
4	Did you need help taking a bath or a shower?	2	1.5
5	Did you need help to use the toilet?	2.03	1.5
	Mean Score	**1.9**	**1.5**
D	**UPPER EXTREMITY FUNCTION**		
1	Difficulty in writing or typing?	1.27	1.37
2	Difficulty in putting on snacks?	1.37	1.37
3	Difficulty in buttoning buttons?	1.34	1.37
4	Difficulty in zipping zipper?	1.34	1.37
5	Difficulty in opening a jar?	1.31	1.37
	Mean Score	**1.3**	**1.4**
E	**WORK/PRODUCTIVITY**		
1	Difficulty in doing daily work around the house	1.68	1.87
2	Difficulty in finishing works	1.71	1.87
3	Difficulty in doing the daily works	1.59	1.87
	Mean score	**1.7**	**1.9**
III	**HIGHER FUNCTIONS**		
A	**LANGUAGE**		
1	Difficulty in speaking?	3.12	3
2	Difficulty in speaking through telephone	3.75	3.12
3	Did other people have trouble in under standing what you say?	3.5	3.5
4	Difficulty in finding words	3.81	3.5
5	Repetation of words	3.87	3.75
	Mean Score	**3.6**	**3.4**
B	**VISION**		
1	Difficulty in watching TV	4.31	4.87
2	Difficulty in reaching things	4.78	5
3	Did you have trouble seeing things off to one side?	4.87	5
	Mean Score	**4.7**	**4.9**
	THINKING		
1	Lack of concentration concentrate	4.43	4.12
2	Memory	5	4.25
3	I had to write things down to remember them	5	4.5
	Mean Score	**4.8**	**4.3**

DISCUSSION:

It is found that the median age of stroke patients is 58 years. In the study conducted in Trivandrum, the median age of stroke patients was 67 years[14]. In this study the mean age of women is 51 years

which agrees with the study conducted by TK Hamzat[15] where mean age of women 56.6 years.. In this study among males, majority falls in age group 50- 60 yrs and among females, majority falls in age group 40-49 years. According to Rodica E.Petrea et al study[16] the mean age of women was 75 and it says that women were significantly older at their first-ever stroke. Among the risk factors, hypertension ranks first similar to Rodica E.Petrea study and it is statistically significant ($p < 0.05$).

In this study family roles are affected more in male patients (mean score=1.2) and social roles are affected more in female patients (mean score=1.3).This result correlates with the study done by Lynch EB1 et al[13].In this study, under higher functions language is severely affected in both sex [male 3.6 and female 3.4] similar to Lynch EB1 et al study. Patients reported experiencing extreme emotional reactions because of communication difficulties. Speech problems have a more direct impact on social relationships than other stroke related disabilities

CONCLUSION:

Stroke is a profound disruption of life. The ability to accept and adapt their behaviour and attitude by decision-making and self management skills are central factors to social participation post stroke. A personalised approach to rehabilitation would be beneficial. Rehabilitation should be focused on what is most meaningful to the person.

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