Journal of Cardiovascular Disease Research

ISSN:0975-3583,0976-2833 VOL14,ISSUE02,2023

Correlation Between Severity Of Stroke And Various Domains Of Quality Of Life

Dr. Lalan Pratap Singh[1], Dr Anubhav Gupta[2], Dr Sarita Singh [3], Dr Ankit Anoop Maravi [4*], Dr Badri Vishal Singh [5]

1. Assistant Professor , Superspecility Hospital, Shyam Shah medical College,Rewa (M.P)
2. Senior Resident, Department Of Medicine, Shyam Shah Medical College,Rewa (M.P)
3. Assistant Professor, Department of Obstetrics And Gynaecology, Shyam Shah Medical College,Rewa (M.P)
4. Senior Resident, Department Of Medicine, Shyam Shah Medical College,Rewa (M.P)
5. Senior Resident, Department Of Medicine, Shyam Shah Medical College,Rewa (M.P)

Corresponding Author Details
Dr Ankit Anoop Maravi
Senior Resident,
Department Of Medicine,
Shyam Shah Medical College,Rewa (M.P)
ankitmaravi@gmail.com

ABSTRACT

Aims and Objective:this study was to investigate the impact severity of aphasia onquality of life in patients after one year of onset of first-ever stroke.

Material & Methods: we included 33 patients with post stroke aphasia who were attending medicine out door and neurology outdoor clinic, admitted in wards of MY HOSPITAL and Patient being recalled from data base in neurology department of MY Hospital Indore. All assessment will be done in 2-3 session. The severity of stroke measured in BARTHEL score , NIHSS , MRS and HASIT score.We used SAQOL-39 scale in the poststroke aphasia in the Hindi speaking for assessment of quality of life .

Result: Most of the subjects with aphasia 12 (29.4%) suffered from aphasia with the level of severity marked as 3 in the Boston diagnostics test. Mean time from stroke period was 2.16 yr. Most of the participants were married, received speech therapy and belonged to middle class. The average BARTHEL score, MR score, NIHS score were 85.69, 2.24, 4.18respectively.domains of quality of life had statistically significantly correlation with severity of stroke measured in BARTHEL score , NIHSS , MRS and severity of aphasia measured in HASIT score.

Conclusions: The persons with mild post stroke aphasia have higher quality of life and persons with more severe post stroke aphasia have lower quality of life, one year after stroke in Hindi speaking patients.

KEYWORDS; Severity Of Stroke, Quality Of Life

INTRODUCTION

Quality of life (QL) may be defined as an individual's perception of their well-being. Health-related QL reflects the impact of a healthy state on a person's ability to lead a fulfilling life, and covers the individual's satisfaction in physical, functional, psychological, and social domains.1 Quality of life is defined as individual's perceptions of

ISSN:0975-3583,0976-2833 VOL14,ISSUE02,2023

their position in life in the context of culture and of value systems where they live and in relation to their goals, expectations, standards and concerns (1).

Hilari et al(2) evaluated the QL in patients with and without aphasia, testing a stroke-specific HRQL scale (the Stroke and Aphasia Quality of Life Scale [SAQOL-39]) in a generic stroke sample that included patients both with and without aphasia. The SAQOL-39 generic stroke scale measures HRQL after stroke in three domains: physical, psychosocial, and communication. This scale demonstrates good internal consistency, test–retest reliability and validity, and adequate responsiveness to changes in a sample of patients with acute and chronic stroke.

The information obtained from QL measures can be useful to identify patients' problems, determine treatment priorities, manage interventions, and monitor disease periods. lives is crucial for defining appropriate and effective interventions; the connection between aphasia and other disabilities and the quality of life can clearly be seen in assessments of the quality of life. Our research mainly focuses on the quality of life of people with severity of aphasia after stroke .

AIMS AND OBJECTIVE

To study the correlationbetween type of post stroke aphasic syndrome on the quality of life of person with aphasia at least one year after onset in Hindi speaking peoples .

MATERIALS AND METHOD

Hospital based group study to examine correlation between quality of life of person with post stroke aphasia.33 patients with post stroke aphasiaPatient attending medicine out door and neurology outdoor clinic in MY HOSPITAL ,admitted in wards of MY HOSPITAL.Patient being recalled from data base in neurology department of MY Hospital Indore.All assessment will be done in 2-3 session, Depending on patient cooperation and fatigability by patient and care taker. The severity of stroke measured in BARTHEL score , NIHSS , MRS and HASIT score.We used SAQOL-39 scale in the post stroke aphasia in the Hindi speaking for assessment of quality of life

Following assessment will be done

a. General medical history

b. General and Systemic examination

c. NIH Stroke scale

d. HASIT (Hindi Aphasia Screening Indore Test) for presence and absence of aphasia

e. Boston Diagnostic Aphasia Examination for aphasia syndrome,

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f. Aphasia profile, Aphasia Severity.

g. Quality of life questionnaire by patient and care giver both (SAQOL -39)

h. Aphasia awareness questionnaire by patient and care giver

INCLUSION CRITERIA

1. A person with stroke of at least one month duration as determined by NIHA stroke and neuroimaging.

2. A person with post stroke aphasia as determined HASIT (Hindi Aphasia Screening Indore Test), Hindi version of Frenchy aphasia screening test

3. Male and Female sex both, between 18 -80 year old will be included

4. Consent given by both patient and care taker are included.

5. Patient and care taker both are capable of responding to various testing method

6. Literate patient (Those who using writing and reading in daily life)

7. A Person has Hindi as primary language

EXCLUSION CRITERIA

1. Patient is severely ill and disabled so as to become incapable to participate in study.

2. Patient with severe Dementia.

3. Patient with severe visual loss.

4. Patient with severe hearing loss.

5. Psychotic like illness.

6. Prisoner.

7. Patient with unknown identity

Results :

Table:1: Demographic andClinical profile of aphasia group

Variable	**N (%)**
Sex	
Male	31 (93.93)
Female	2 (6.06)
Age in years	
Mean [SD]	49.69 [10.86]
Stroke type	

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Ischemic Hemorrhagic Unknown	31(93.93) 2 (6.06) 0(0)
Time since stroke Mean [SD] year	2.16 [1.64]
Range 1–2 y after onset 2–4 y after onset 4 y after onset	26 (78.78) 4 (12.12) 03 (9.09)
Marital status Married Single Divorced or widowed	 31 (100) 0 (0) 0 (0)
Socioeconomic status High Middle Low	 3 (9.09) 25 (75.75) 5 (15.15)
Treatment taken Yes No	 31 (100) 0 (0)
Variable	**N (%)**
Resident status Urban Rural	 32 (96.96) 1 (3.03)
Barthel score	Mean [SD]: 85.69 { 11.59)
MRS score	Mean [SD]: 2.24 {1.42]
NIHS score	Mean [SD]: 4.18 { 3.15]
HASIT score	Mean [SD]: 14.54 { 7.71]
BADE score	Mean [SD]: 3.06 {1.53]
TYPE OF APHASIA	
Broca's	8
Global	8
Anomic	9
Mixed	6
Wernick's	1
Transcortical	1

Demographic and Clinical characteristics of the aphasia group are presented in Table 1.

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Table no :2 : Correlation between severity of stroke and various domains of quality of life

		Physical domain	Psychosocial domain	Communication domain	Energy domain
Barthel score	Spearman's Coefficient	.823	.443	.533	.148
	P value	.000	.010	.001	.411
	N	33	33	33	33
NIHSS	Spearman's Coefficient	-.828	-.335	-.609	-.155
	P value	.000	.057	.000	.390
	N	33	33	33	33
MRS	Spearman's Coefficient	-.593	-.322	-.619	-.092
	P value	.000	.068	.000	.612
	N	33	33	33	33
HASIT	Spearman's Coefficient	.548	.181	.806	.074
	P value	.000	.313	.000	.682
	N	33	33	33	33

As per this table following domains of quality of life had statistically significantly correlation with severity of stroke measured in BARTHEL score , NIHSS , MRS and severity of aphasia measured in HASIT.

Table no :3 : Correlation between the domains of quality of life with severity of aphasia

	Physical Domain	Psychosocial Domain	Communication Domain	Energy Domain
Spearman's Coefficient	.463	.111	.802	.092
P value	.007	.537	.000	.610
N	33	33	33	33

As per this table physical domain and communication domain of quality of life had statistically significantly correlated with severity of aphasia.

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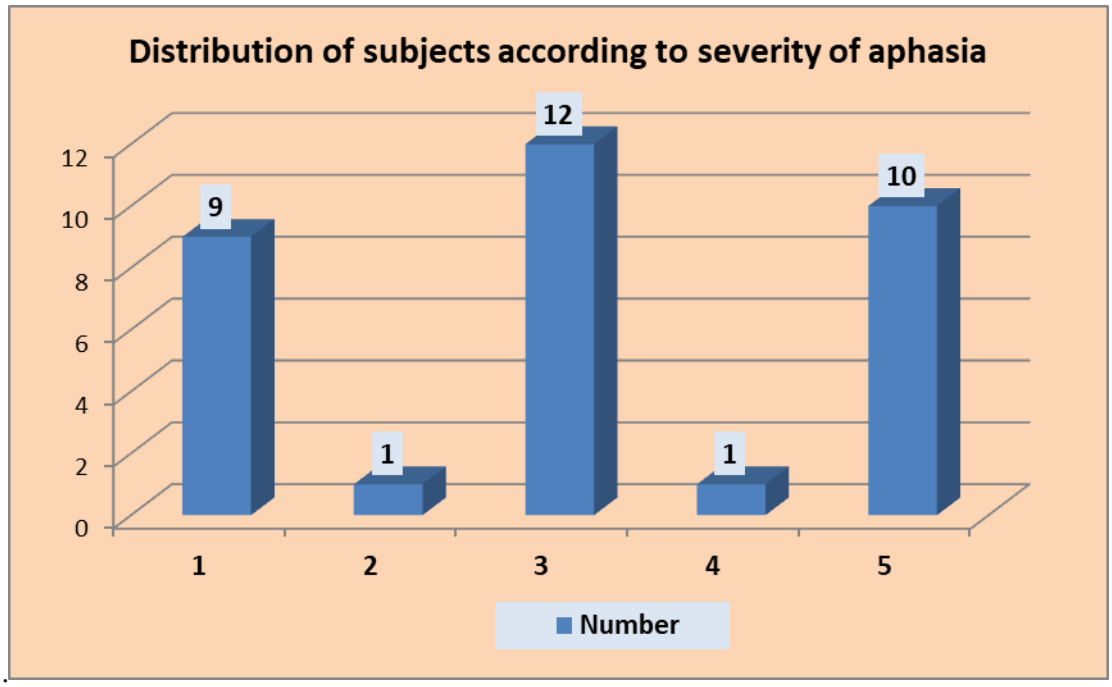
Table-14: Distribution of subjects according to severity of aphasia

Aphasia severity	N
1	9
2	1
3	12
4	1
5	10
TOTAL	33



1-All communication is through fragmentary expression, great need for inference, questioning, and guessing by the listener. The range of information that can be exchanged is limited, and the listener carries the burden of communication; 2-Conversation about familiar subjects is possible with help from the listener. There are frequent failures to convey the idea, but the patient shares the burden of communication; 3-The patient can discuss almost all everyday problems with little or no assistance. Reduction of speech and/or comprehension, however, makes conversation about certain material difficult or impossible; 4-Some obvious loss of fluency in speech or facility of comprehension, without significant limitation on ideas expressed or form of expression; 5-Minimal discernible speech handicap, the patient may have subjective difficulties that are not obvious to the listener.

By analyzing results referring to the severity of aphasia it is clearly seen that all degrees of aphasia severity were present in the sample, from the most severe, with almost no ability of speech, to the least severe cases characterized by minimal, barely noticeable speech difficulties which were seen. Most of the subjects with aphasia 12 (29.4%) suffered from aphasia with the level of severity marked as 3 in the Boston diagnostics test, which may indicate

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possible communication in almost all topics from daily life, with a little help from the listener, but also signifies the reduced ability of spontaneous speech which makes conversations about specific subject virtually impossible.

Discussion :

We have included 33 patient with aphasia (31 male and 2 female) having mean age 49.69 years. Most of the patients were the males with gross under representation of female could not be avoided due to social reasons. Our patients were younger as compared to subjects in studies from Western countries (69yrs-79yrs). Mean time from stroke period was 2.16 yr, comparable with other Western studies. Most of the participants were married, received speech therapy and belonged to middle class. The average BARTHEL score, MR score, NIHS score were 85.69, 2.24, 4.18 respectively. The most common aphasia syndromes were anomic (9/33,27.7%), Broca's (8/33,24.4%), Global (8/33,24.4%), mixed nonfluent (6/33,18.1%). The least common were trans cortical (1/33,3.03%) and wernick's (1/33,3.03%).

In our study, the severity of aphasia was significantly correlated with physical domain, communication domain, but not psychosocial domain and Energy domain. Impairment of language was evaluated by using Hindi Aphasia Screening Indore Test (HASIT), Boston Diagnostic Aphasia Examination (BDAE). HASIT score and BADE score were significantly correlated with physical domain and communication domain. The persons with mild post stroke aphasia have higher quality of life and persons with more severe post stroke aphasia have lower quality of life, one year after stroke in Hindi speaking patients. In our study the severity of aphasia was not significantly correlated with psychosocial domain and energy domain. It may be due to limited means of communication. Emotional problems can often be underestimated in patient with aphasia. The mild and chronic aphasic patients had a better quality of life than severe and acute ones, underlining the fact the passing of time helps patients with language disorders to adapt themselves to the new condition. Our results are similar to the many study but with some differences.

Sinanovic et al(3), showed that the severity of aphasia was significantly correlated the all domain of SAQOL-39 and Total SAQOL- 39 score.

Spaccavento et al(4),showed that the time from stroke and the severity of aphasia influence the patient's functional and communicative autonomy, but not the psychological condition.

Posteraro et al (5) also found the severity of aphasia was significantly correlated in the overall quality of life score measured by SAQOL- 39, and in all area except energy domain.

Author names	**Sinanovic et al**	**Spaccavento et al**	**Hyeijn et al**	**Bahia et al**	**Our studies**
Ref:	Periodicumbiologorum Vol. 114, No.3, page 435 -440; 2012	Neuropsychiatric Diseases and Treatment 2014 : Vol.10, page 27-37	YMJ ; 2015 No. 56(6) , page :1694-1702	AudiolCommun Res. 2014; 19(4) : page 352-9	

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Country	Bosnia	Italy	Korea	Brazil	India
No. patients	51PWA	146 PWA and 37 control	30 PWA and 42 control	11 PWA	33PWA
Time duration	1 years	3 months	2.9 years	6 years	1 year
Scale used	SAQOL-39	QLQA(QL questionnaire for aphasia)	SAQOL-39	SAQOL-39	SAQOL-39

SUMMARY AND CONCLUSION

We also validate the SAQOL-39 scale in the post stroke aphasia in the Hindi speaking. SAQOL-39 is reliable and valid measure of the quality of life in people with aphasia. We found that SAQOL-39 have high internal consistency and high correlation's coefficient in HINDI speaking patient.

We have determined the quality of life after the post stroke aphasia in Hindi speaking patient have reduced the in the physical, communicative, psychosocial, energy aspect. Previous study also showed that subjects with aphasia had significantly lower the quality of life than subjects from the control group.

The average BARTHEL score, MR score, NIHS score were 85.69, 2.24, 4.18 respectively.

.The persons with mild post stroke aphasia have higher quality of life and persons with more severe post stroke aphasia have lower quality of life, one year after stroke in Hindi speaking patients.

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