Evaluation Of Clinical Profile, Type Of Aphasia And Severity Of Aphasia In   Hindi Speaking People

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Abstract

Aim: this study explore the clinical profile , type and severity of aphasia after one year of stroke in Hindi speaking people. Material & methods: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, by using HASIT (Hindi Aphasia Screening Indore Test) for presence and absence of aphasia. Results: The 33 aphasic subjects (31 male and 2 female) had mean age 49.69. Most of patients are the male. Mean stroke period is 2.16 yr. 31 subjects had ischemic and 2 had Hemorrhagic type of stroke. the most common was anomic aphasia, which was diagnosed in 9 subjects (27.7%), followed by Broca's aphasia in 8 subjects(24.4%),Global aphasia in 8 subjects (24.4%), mixed non fluent in 6 subjects (18.1%). The least common were trans cortical types of aphasia, diagnosed in 1 subject (3.03%), just like Wernicke s aphasia in 1 subject (3.03).

conclusion : Anomic aphasia was most commonin Hindi speaking peoples .

KEY WORDS : Aphasia , Hindi speaking peoples , Stroke , NIH stroke scale , HASIT scale

Introduction

Aphasia', any partial or total loss of language ability due to brain damage. Specifically, aphasia is an acquired language disorder associated with problems in language formulation or/and comprehension (1).Aphasia is one of the most common symptoms in acute and chronic stroke patients (2). Aphasia may be temporary or permanent, and the exact nature of spontaneous or gradual recovery patterns among different aphasic patients is often unknown(3). For example, about half of the people who show signs of aphasia can recover completely within a few days or even months after the acute event, but there are still a number of people that suffer from a permanent form of aphasia However, the greatest improvement occurs in the first six months after brain damage and the first two to three months are the most important(4). Recovery rates from aphasia vary and depend upon physiological, cognitive, and psychosocial factors(5,6).Relatedinteresting questions are whether age and sex influence severity, type and remission ofaphasia. this study explore the clinical profile , type and severity of aphasia , one year after stroke in Hindi speaking people.

AIMS AND OBJECTIVE

To determine the clinical profile ,type and severity of aphasia at least one year after stroke onset in Hindi speaking peoples.

MATERIALS AND METHOD

This study entitled to evaluate aphasia profile , aphasia severity in poststroke aphasic syndrome of people with aphasia thatwas caused by a stroke, at least one year after onset "will be conducted indepartment of medicine in MGM medical college and MYH hospital Indorepatient with aphasia and after stroke.Hospital based group study to examine person with post stroke aphasia and various demographic and clinicalparameters.33patients with post stroke aphasia who were attendingmedicine out door and neurology outdoor clinic , admitted in wards of MY

HOSPITAL and Patient being recalled from data base in neurology department of MY HospitalIndore.All assessment will be done in 2-3 session, Depending on patient cooperationAndfatigability by patient and care taker. 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
f. Aphasia profile, Aphasia Severity.

INCLUSION CRITERIA
1. A person with stroke of at least one month duration as determined by NIHAstroke and neuroimaging.
2. A person with post stroke aphasia as determined HASIT (Hindi AphasiaScreening 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 testingmethod.
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 participatein 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 :
The 33 aphasic subjects (31 male and 2 female) had mean age 49.69. Most ofpatients are the male. Mean stroke period is 2.16 yr. 31 subjects had ischemicand 2 had Hemorrhagic type of stroke. most of patients (100 %) were married,middle class, (100%) taking speech therapy .Type of aphasia in order offrequency were anomic, global, and Broca's aphasia (Table 1).
Table 1 :Demographic and Clinical 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	
Ischemic	31(93.93)
Hemorrhagic	2 (6.06)
Unknown	0(0)
Time since stroke	
Mean [SD] year	2.16 [1.64]
Range	26 (78.78)
1–2 y after onset	4 (12.12)
2–4 y after onset	03 (9.09)
4 y after onset	

Marital status	
Married	31 (100)
Single	0 (0)
Divorced or widowed	0 (0)
Socioeconomic status	
High	3 (9.09)
Middle	25 (75.75)
Low	5 (15.15)
Treatment taken	
Yes	31 (100)
No	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

Table:2: Distribution of subjects according to type of aphasic syndrome

AHASIA TYPE	Number
Brocas	8
Global	8
Anomic	9
Mixed	6
Wernicks	1
Transcortical	1
Total	33

Regarding the type of aphasic syndrome, the most common was anomic aphasia, which was diagnosed in 9 subjects (27.7%), followed by Broca's aphasia in 8 subjects(24.4%), Global aphasia in 8 subjects (24.4%), mixed non fluent

in 6 subjects (18.1%). The least common were trans cortical types of aphasia, diagnosed in 1 subject (3.03%), just like Wernicke s aphasia in 1 subject(3.03).

Table-3: 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 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) havingmean age 49.69 years.Most of the patients were the males with gross underrepresentation of female could not be avoided due to social reasons. Ourpatients were younger as compared to subjects in studies from Westerncountries (69yrs-79yrs).Mean time from stroke period was 2.16 yr, comparablewith other Westernstudies. Most of the participants were married, receivedspeech therapy and belonged to middle class. The average BARTHEL score,MR score, NIHS score were 85.69, 2.24, 4.18 respectively. The most commonaphasia 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 transcortical (1/33,3.03%) and wernick's(1/33,3.03%).

SINANOVIC et al 2012(7), found that the anomic aphasia was the mostcommon, which was diagnosed 20 subjects (39.2%), followed by Broca'saphasia in 14 subjects (27.5%), conduction aphasia in 5 subjects (9.8%), mixednonfluent in 4 subjects (7.8%), and alexia with agraphia with the samefrequency. The least common were transcortical types of aphasia, transcorticalmotor aphasia being diagnosed in 2 subjects (3.9%), just like trancorticalsensory aphasia.

SINANOVIC et al 2012 (7), also found that the severity of aphasia it is clearlyseen that all degrees of aphasia severity were present in the sample, from themost severe, with almost no ability of speech, to the least severe casescharacterized by minimal, barely noticeable speech difficulties which wereseen in 11 subjects (7 subjects with anomic aphasia and 4 subjects withdiagnosed alexia with agraphia). 5.0%, 17.6%, 29.4% , 11.7%, 21.3% PWAsuffered with the level of severity marked as 1 , 2, 3, 4,

Jingfan Yao et al 2015(8) ; they did retrospective analysis on data of 421 patients with acute stroke of relationship of the types ofpost-stroke aphasia with sex, age and stroke types. They found All subjects were right-handed,which males and females accounted for 69.60% and 30.40%, respectively. There were 116 cases of Broca's aphasia (85 males), 35 cases of Wernicke'saphasia (20 males), 15 cases of conductive aphasia (10 males), 63 cases

oftranscortical motor aphasia (50 males), 11 cases of transcortical sensoryaphasia (8 males), 27 cases of transcortical combined aphasia (13 males), 73cases of anomic aphasia (47 males) and 81 cases of global aphasia (60 males).Male patients (69.60%) have a significantly higher morbidity of aphasia thanthat of females (30.40%) after stroke ($\chi2$ = 11.57, P = 0.003), especially thoseunder 65 years old (73.38%). For people 65 years and older, the morbidity offemale (42.97%) tends to increase with age. Sex has no significant influence onthe types of aphasia ($\chi2$ = 13.84, P = 0.054).Broca'saphasia is the most common type in both male and female (29.01%,24.22%, respectively). The distribution of aphasic types has no obviousdifference among three age groups ($\chi2$ = 14.94, P = 0.382). Aphasia induced byCI (306 cases) is more common than that by ICH (115 cases), but there was nodifference in distribution of types of aphasia ($\chi2$ = 13.23, P = 0.067).

Pedersen PM et al 2004(9); determine the types, severity and evolution ofaphasia in unselected, 270 acute stroke patients with aphasia and evaluate potential predictors forlanguage outcome 1year after stroke. they found The frequencies of the different types of aphasia in acute first-everstroke were: global 32%, Broca's 12%, isolation 2%, transcortical motor2%,Wernicke's 16%, transcortical sensory 7%, conduction 5% and anomic25%. These figures are not substantially different from what has been found inprevious studies of more or less selected populations. The type of aphasiaalways changed to a less severe form during the first year. Nonfluent aphasiacould evolve into fluent aphasia (e.g., global to Wernicke's and Broca's toanomic), whereas a fluent aphasia never evolved into a nonfluent aphasia. Oneyear after stroke, the following frequencies were found: global 7%, Broca's 13%, isolation 0%, transcortical motor 1%, Wernicke's 5%, transcorticalsensory 0%, conduction 6% and anomic 29%. The distribution of aphasia typesin acute and chronic aphasiais thus, quite different. The outcome for languagefunction was predicted by initial severity of the aphasia and by the initial strokeseverity (assessed by the Scandinavian Stroke Scale), but not by age, sex or type of aphasia. Thus, ascoring of general stroke severity helps to improve theaccuracy of the prognosisfor the language function. One year after stroke,fluent aphasics were older thannon -fluent aphasics, whereas such a differencewas not found in the acute phase.

Summary and conclusions:
- mean age of patients was 49.69 years.
- Mean time from stroke period was 2.16 yr.
- 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%).

Limitations:

This was a single center non randomized observational study involving small study group with a relatively short follow-up duration.

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