



CODEN [USA]: IAJ PBB

ISSN: 2349-7750

**INDO AMERICAN JOURNAL OF
PHARMACEUTICAL SCIENCES**<http://doi.org/10.5281/zenodo.1976941>Available online at: <http://www.iajps.com>**Research Article****THE RATE OF THE SEIZURES AT EARLY STAGE IN THE
PATIENTS OF STROKE****Dr. Hafiza Fizza Zahid, Dr. Faiza Noor, Dr. Arslan Arshad**
Jinnah Hospital Lahore**Abstract:**

Objective: The main objective of this case study is to conclude the rate of the seizures at early stage in the stroke patients.

Study Design: This was an elaborate transverse research work.

Methodology: The information of a hundred and four patients of stroke gathered after the fulfilment of the willing forms in the department of interventional neuroradiology at LGH (Lahore General Hospital). Neurologist evaluated every patient for the confirmation of the detection and causes of the stroke. The patients of the stroke were administered according to the protocol of the hospital. Follow up of the patients carried out for seven days. The availability of the early seizures was also put into documentation. All the information of the stroke patients was gathered in a special Performa designed for this purpose.

Results: In this research work, more than thirty eight percent patients were 18 - 50 year of age while more than 61% patients were from 51 – 75 year of age. The sample comprised of 55 male and 49 female patients. Twenty three patients were the victims of haemorrhage & eighty one patients were suffering from ischemic stroke. The rate of the seizures at early stage in the stroke patients concluded in 6.73% patients.

Conclusion: We found that the rate of the seizures in early stage is very high & significant in the stroke patients; this collected information is most important for our communities & there is a requirement of other research works to confirm the findings of this case study.

Keywords: Seizure, transverse, patient, stroke, ischemic, victim, haemorrhage.

Corresponding author:

Hafiza Fizza Zahid,
Jinnah Hospital,
Lahore

QR code



Please cite this article in press Hafiza Fizza Zahid et al., *The Rate Of The Seizures At Early Stage In The Patients Of Stroke.*, Indo Am. J. P. Sci, 2018; 05(12).

INTRODUCTION:

Stroke is loss of the consciousness of the brain due to the interruption of the oxygen rich blood to the brain. Ischemia or haemorrhage is the cause of this interruption. Ischemia is the blockage of the veins of blood due to thrombosis or by the hypo perfusion of the cerebral. Hemorrhagic is the outcome of the bleeding from the veins present in the brain. In a consequence, the affected area of the brain is unable to work properly which can come with the inability to move of one side or limbs of two sides, no understanding, loss of the speech or vision loss of one side [1]. Seizures are the incidents of anomalous extremes [2]. Therapy is not required after 1st seizure unless complications obtained from imaging [3]. Five to ten percent of all population will get unprovoked seizure in life time. About 80% seizures have an impact on one percent of population recently [6].

Convulsive are the most frequent seizure types [7] with making sixty percent seizures of the total. Forty percent seizures are non convulsive as seizure of absence is one of them [8]. Seizures of the post stroke have the ability to happen after the start of the ischemia or can be late [9]. The initially start of the seizures are thought to be aggravated seizures [10]. A large amount of the seizures occurs from six months to two years after the incidence of the stroke [11]. In a research work, Beghi integrated both strokes of ischemic & haemorrhagic in his study on seven hundred and fourteen patients. Early seizures happened in about six percent patients. The occurrence of the seizures with acute symptoms is very high in the patients with 1st stroke in the future follow ups. Haemorrhage & ischemic were autonomous complications of prediction for acute seizures [12]. In another research work, early seizures were diagnosed in fifty eight patients out of three hundred and seventy two patients of stroke. Ischemic stroke was present in two hundred and seventy one patients & haemorrhage stroke was present in ninety eight patients. Related feature of the seizure linked with the haemorrhagic stroke patients [13]. In another research work, out of fifty, twenty eight were males & twenty two were females study, with an average age of 56.86 +- 15.26 years. Early seizures were seen within two weeks in twenty nine patients. More than two seizures were present in thirty one patients. Ischemic stroke occurred in forty patients [14]. The purpose of this research work was to assess the rate of the seizures in the patients of both types of strokes.

METHODOLOGY:

The research work carried out in the department of interventional neuroradiology of LGH located in

Lahore. This research work started in 15-02-2017 lasted up to 13-08-2017. There were one hundred and four participants of this research work with the use of ninety five percent CI, seven percent error margin percentage as about sixteen percent of the initial seizure in stroke patients [13].

Inclusion Standards;

- Patients of both sexes.
- Having age from fifteen to seventy five years.
- Imaging technique confirmed the stroke.

Exclusion Standards;

- Patients with anomalies in metabolic functioning.
- Patients with infarction of cerebella.
- Patients with seizure abnormalities.
- Past background of SOL Brian with new start of CVA.
- Patients of recurrent stroke.

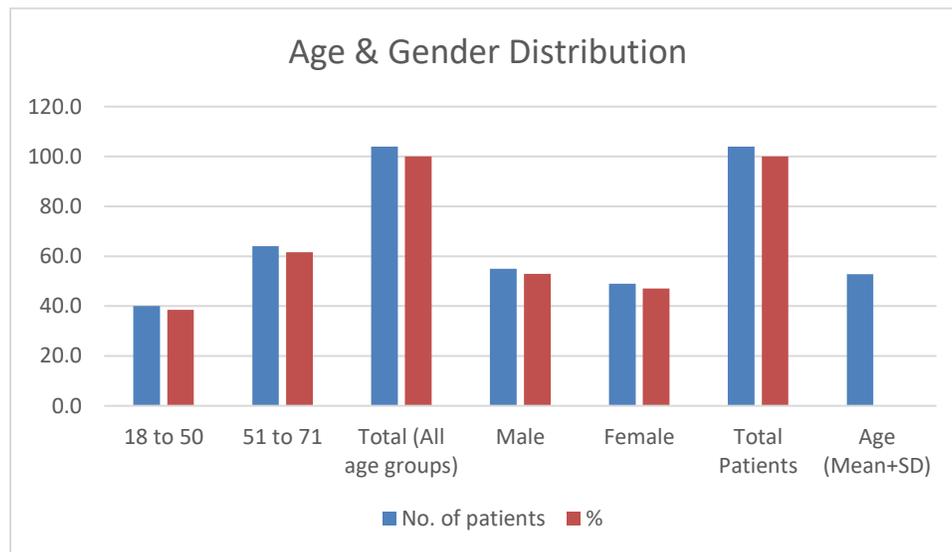
Data Collection: Information of one hundred and four patients was gathered after filling o the willing forms. Neurologist evaluated all the patients for the confirmation of the detection & cause of the initiation of the stroke. The management of the patients of stroke carried out according to the protocol of the hospital. Follow ups carried out or seven days. The administration of the patients having seizures carried out with respect to the protocol of the hospital. A special designed form was in use for the collection of all data.

Data Analysis: The SPSS software version twenty two was in use for the collection and analysis of the information. Mean+S.D was in use for the representation of the age or quantitative values. Rate and percentage were in use for the qualitative values. Chi square test method was also use for comparisons of the variables. P amount of less than 0.05 was considered statistically significant.

RESULTS:

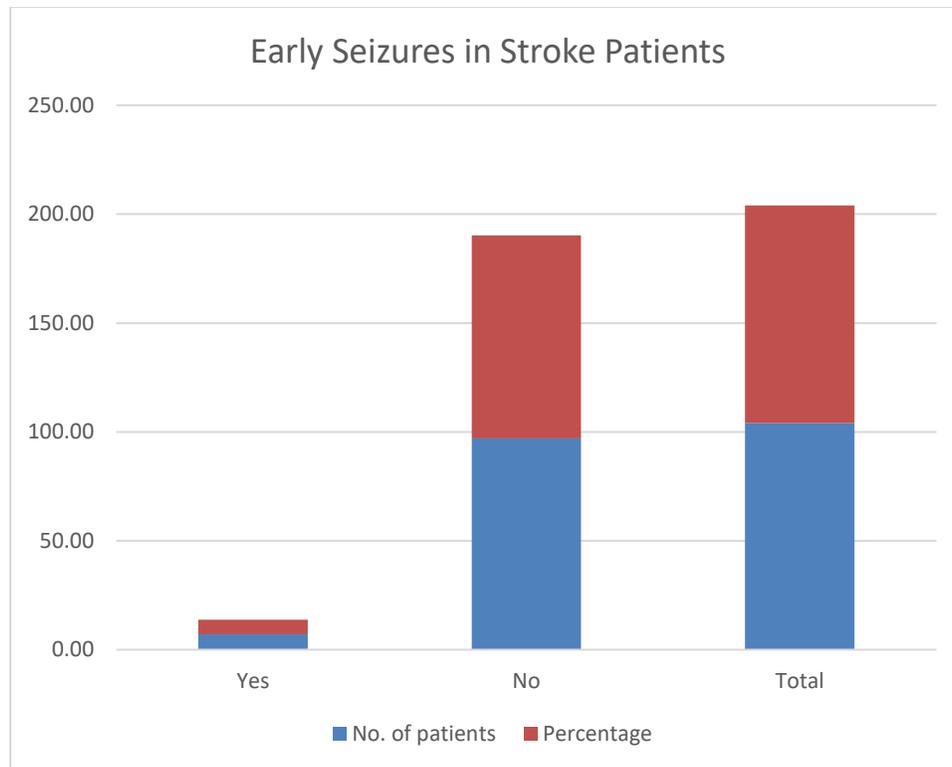
One hundred and four patients entered in the research work too conclude the rate of the seizures in the stroke patients. Age division was carried out displaying that forty patients were from eighteen to fifty year of age while sixty four patients were from fifty one to seventy five year of age. The average age of the patients was 52.75 +- 9.22 years. Fifty five were the men and forty nine were the female participants as described in Table-1. Stroke types show that twenty three wee the patients of haemorrhage stroke and eighty one patients were the victim of ischemic stroke.

Age groups	No. of patients	%
18 to 50	40.0	38.460
51 to 71	64.0	61.540
Total (All age groups)	104.0	100.0
Gender		
Male	55.0	52.890
Female	49.0	47.110
Total Patients	104.0	100.0
Age (Mean+SD)	52.750	



The rate of the initial seizures in the stroke patients documented in seven patients while ninety seven patients had no outcome of any morbidity as described in Table-2.

Seizures	Yes	No	Total
No. of patients	7.00	97.00	104.00
Percentage	6.730	93.270	100.00



Out of seven patients, two patients were from 18 -50 year of age & five were from 51 - 75 year of age. The significant P amount was 0.45 as shown in Table-3. Three were males and four were female patients of the seizures. Four patients had haemorrhage and three patients had ischemic as described in Table-3.

Table III: Classifications of Seizures in Stroke Cases with respect to Age (n=104)

		Seizures		P value
		Yes	No	
Age Groups (Years)	18 to 50	2.00	38.00	0.4500
	51 to 75	5.00	59.00	
	Total	7.00	97.00	
Gender	Male	3.00	55.00	0.4400
	Female	4.00	49.00	
	Total	7.00	97.00	
Type of Stroke	Hemorrhagic	4.00	23.00	0.0500
	Ischemic	3.00	81.00	
	Total	7.00	97.00	

DISCUSSION:

After stroke, seizures are very frequent in early stage & they are reported from 2.5% to 5.7% in fourteen days after the stroke. The impacts of these problems on the prediction of the course of disease are unknown. This study work was designed to assess the rate of the

seizure in the patients suffering of stroke. The rate of the seizures in patients suffering of stroke in this research work was available in seven patients. This outcome is very much similar to another research work displaying the initial stage after the stroke with rate of 2.5%-5.7% in fourteen days after stroke [15-18]. Some works [19-21] but not all [15] past research works have

showed the association between size of infarct & ES. Some past research works [15, 18] but no other works [17, 18] have showed association between ES & ICH.

Andrea Alberti evaluated the frequency of ES as well as its medical impacts within 1st week after the stroke. Early seizures are not linked with the enhancement of the unfavourable result. Haemorrhagic transformation concluded as an autonomous factor of prediction for early seizures [22]. A current research of Chraa Mohamed [23] evaluated the rate prediction features as well as medical results in the patients suffering of first attack of stroke & concluded that 47 patients found with early seizures making thirteen percent the total. Early seizures are linked with the enhancement of the unfavourable outcome.

In another research work, ES happened in fifty eight out of three hundred and seventy two stroke patients. Ischemic stroke was present in two hundred and seventy one patients & ninety eight patients have the stroke of haemorrhage. In the group of ischemic stroke, thrombosis of cerebral was available in one hundred and ninety four patients. In the group of haemorrhage patients, ICH (intracerebral haemorrhage) was present in fifty patients & twenty five patients had this stroke from an origin which was unknown. These outcome values were little bit higher in this research work.

CONCLUSIONS:

Conclusions displayed that the rate of the seizures in early stage is very high in the stroke patients. Future studies are required to confirm the conclusions of this research.

REFERENCES:

1. Donnan GA, Fisher M, Davis S. Stroke. Lancet. 2008;371 (9624): 1612-23.
2. Fisher R, van Emde Boas W, Blume W, Elger C, Genton P, Lee P, Engel J. Epileptic Seizures and epilepsy. *Epilepsia*. 2005;46(4):470-2.
3. Wilden JA, Cohen-Gadol AA. Evaluation of first non-febrile seizures American family physician. 2012;86(4):334-40.
4. Longo DL. Harrison's principles of internal medicine. New York: McGraw-Hill. 2011;18:369.
5. Berg AT. Risk of recurrence after a first unprovoked seizure. *Epilepsia*. 2008;49(1):13-8.
6. Epilepsy. World Health Organization. 2013.
7. The diagnosis and management of the epilepsies in adults and children in primary and secondary care. National Clinical Guideline Centre. 2012;21-28.
8. Hughes JR. Absence Seizures. A review of recent reports with new concepts. *Epilepsia*

& behavior. 2009;15(4)404-12.

9. Camio lo O, Goldstein LB. Seizures and Epilepsy after Ischemic stroke. *Stroke* 2004;35:1769-75.
10. Khealani BA, Ali S, Baig SM. Post Stroke Seizures: descriptive study from a tertiary care centre in Pakistan. *J Pak Med Assoc*. 2008;58:365-8.
11. Beighi E, D' Alessandro R, Beretta S, Consoli D, Crespi V. Incidence and predictors of acute symptomatic seizure after stroke. *Neuro* 2011;77:1785-93.
12. Panitchote A, tiamkao S. Prevalence of Post-Stroke Seizure in Srinagarind Hospital, *J Med Assoc Thai*. 2010;93(9):1037-42.
13. Siddiqi SA, Hashmi M, Khan FS, Siddiqi KA. Clinical Spectrum of Post-Stroke Seizures. *J CPSP*. 2011;21(4):214-18.
14. Kilpatrick CJ, Davis SM, Tress BM, Rossiter SC, Hopper JL, Vandendriesen ML. Epileptic seizures in acute stroke. *Arch Neurol*. 1990;47:157-60.
15. Louis S, McDowell F. Epileptic seizures in nonembolic cerebral infarction. *Arch Neurol*. 1967;17:414-8.
16. Lo YK, Yiu CH, Hu HH, Su MS, Laeuchli SC. Frequency and characteristics of early seizures in Chinese acute stroke. *Acta Neurol Scand*. 1994;90:83-5.
17. Black SE, Norris JW, Hachinski VC. Post-stroke seizures. *Stroke*. 1983;14:134.
18. Lancman ME, Golimstock A, Norscini J, Granillo R. Risk factors for developing seizures after stroke. *Epilepsia*. 1993;34:141-3. 23.
19. Gupta SR, Naheedy M, Elias D, Rubino FA. Postinfarction seizures: a clinical study. *Stroke*. 1988;19:1477-81.
20. Olsen TS, Høgenhaven H, Thage O. Epilepsy after stroke. *Neurology*. 1987;37:1209-11.
21. Alberti A, Paciaroni M, Caso V, Venti M, Palmerini F, Agnelli G. Early seizures in patients with acute stroke: Frequency, predictive factors, and effect on clinical outcome. *Vasc Health Risk Manag*. 2008 Jun; 22(3): 715-20.
22. Chraa Mohamed1,&, Najib Kissani. Early seizure in acute stroke. *Pan African Medical Journal*. 2015;20:136.
23. Sims NR, Muyderman H. Mitochondria, oxidative metabolism and cell death in stroke. *Biochimica et Biophysica Acta* 2009;1802(1):80-91.
24. Longo DL. Harrison's principles of internal medicine. New York: McGraw-Hill. 2012;18.
25. Kumar, Vinay. Robinson and Cotran pathologic

- basis of Disease. Philadelphia, PA. Saunders/Elsevier. 2010;8:1290-98.
27. Feigin VL, Rinkel GJ, Lawes CM, Algra A, Bennett DA, van Gijjan J, Anderson CS. Risk factors for subarachnoid hemorrhage: an updated systematic review of epidemiological studies. *Stroke*, 2005;36(12):2773-80.