ORIGINAL | INDEPENDENT JOURNAL OF ALLIED HEALTH SCIENCES

IJAHS-0329

FREQUENCY OF PRESSURE ULCERS IN STROKE PATIENTS

Iqra Karamat, Student at University of Lahore
Shahbaz Ahmad, Student at the University of Lahore
Arooj Raza, Assistant Professor of University of Lahore
Ashfaq Ahmad, Associate Dean is Head of Department, at University of Lahore
Sadia, Lecturer at University of Lahore

Date of Received: 05/07/2019 **Date of Acceptance:** 15/08/2019

ABSTRACT

Background & Introduction: Pressure ulcers are common cause of morbidity and mortality in older stroke patients. The frequency of pressure sore in older adult people continues to be very high especially in those having chronic illnesses like cerebrovascular accident and has carried advanced alertness to complete, defensive and therapeutic procedures for management. **Objective:** To determine frequency of pressure ulcers in stroke patients. **Methods:** Study is observational study, non-probability consecutive sampling was use to collect data. Study was completed in 3 after approval of synopsis. 196 stroke patients enrolled in study. Standard questionnaire from European Pressure Ulcer Prevalence Minimal data set was used for data collection. Data was analyzed using IBM SPSS Statistics 25. **Results:** Among 196 stroke patients females were frequent 55.1%.125(63.5%) have duration of hospital stay 6days-1month.138(70.4%) were with completely limited sensory perception.63(32.1%) were rarely moist,186(94.9%) were bed fast.153(78.1%) were with completely limited mobility, 165(84.2) have very poor nutrition, 19(9.7%) have probably inadequate nutrition and 12(6.1%) have adequate nutrition.193(98.5) were with problem of friction and share, 2(1%) have potential problem and 1(0.5%) were with no apparent problem. **Conclusion**: Among 196 patients majority were females and have completely limited mobility. Mostly inadequate nutrition, most patients were rarely moist. Location of most severe pressure ulcers was sacrum and patients were usually not receiving any preventive equipment. Patients have completely limited mobility and majority have potential problem with friction/shear. Repositioning of patients were irregularly

Correspondence Address
Iqra Karamat
Doctor of Physical Therapy
Iqrakaramat4nd@gmail.com

Key Words: Pressure ulcers, Stroke, CVA, bed sores, decubitus ulcers

Article Citation: Karamat I, Ahmad S, Raza A, Ahmad A, Sadia. Frequency of pressure ulcers in stroke patients. **IJAHS,** Jul-Sep 2019;03(157-162):01-06.

INTRODUCTION

A pressure ulceris also called bed sores and decubitus ulcer is defined as local damage to surface of body, underlying tissue or both, usually above a bony eminence, because of continuous pressure on body surface usually in bed ridden patients. A number of causativefactors are also related with pressure ulcers butimportance of these factors is nevertheless to be clarified.[1] Old patients who have reduced movement, inadequate psychological position and bigger skin resistance and shear also increased risk of rising pressure ulcer.[2]

There are some types of pressure ulcers ranges from bruised unbroken skin or fluid-filled sore. Stage one include unbroken covering with slight erythema of a local part. Stage two is half width damage of dermis offering as a superficial open sore without marsh. Stage three complete depth tissue damages. Stage four complete depth soft tissue injuries with uncovered bone. Unstageable involve complete depth tissue injury which has base sheltered by bog.[3] Many risk assessment scales use for pressure ulcers but commonly used is Braden scale which include in several studies and have the greatest consistency and soundness signs in variety of conditions, and has confirmed as superior interpreter of pressure ulcers unaccompanied.[4]

CVA is defining as a neural damage because of focal tissue of the CNS damage by blockage which is called cerebral infarction or it may because of rupture of vessel which is called intracerebral hemorrhage. Cerebral infarction is death of cells because of lack of oxygen.[5] Patients having neurological sicknesses stay extra time limit to hospital bed, whatever declines their movement and raises the danger of evolving pressure sores. Patients presented this outline have a reduced understanding level and not able to release bone eminence pressures, protection, this way, strength and length of the burden on the skins.[6]

Bed sores develops a main problem particularly in patients who have movement impairment. Any of the situations with a danger of suffering movement impairment is cerebrovascular accident/stroke. CVA is a state that raises from consequence of circulatory illnesses of brain that causes death of a part of brain result in paralysis or death of person.[7] In stroke many movement disorders occur which contain hemiplegia which is basically weakness that involve any of four limbs and the very serious weakness that cause problem for patient to walk independently and easily, make difficult to perform daily activities.[8] According to a study the prevalence of pressure ulcers is 53.7%.[9] Pressure sore develop on bony surfaces. Specially occur on following sacrum which is most common, coccyx and heels.[10,11] As other find frequency of pressure ulcers in older stroke patients and rationale of my study was I found frequency of pressure ulcers in all stoke patients.

MATERIALS AND METHODS

An Observational study was done. 196 stroke patients were selected for data collection from different hospitals of Lahore including Services Hospital Lahore, Lahore General Hospitals, Shaikh Zayed Hospital and Jinnah Hospital Lahore. Standard questionnaire from European Pressure Ulcer Prevalence Minimal data set was used for data collection. Data collection procedure was by non-probability consecutive sampling. Patients included in study having diagnosis of stroke and duration of hospital stay 6 days, 6days-1months or more than 1 month and Patients who can walk and Duration of hospitalization less than 6 days are excluded from the study. The process explained to patients and data collect after their permission. For data analysis IBM SPSS Statistics 25 was used. Data was analyzed using SPSS version 25.0. Qualitative variables were presented in the form of frequency and percentage table and bar charts.

RESULTS

Among 196 stroke patients 13(6.6%) are in age limit 19-39 years, 56(28.6%) in age limit 40-59, 64 (32.7%) are in age limit 60-69, 41 (20.9%) are in age limit 70-79, 17 (8.7%) are in age limit 80-89 and 5(2.6%) are older than 89 years of age. Out of 196 stroke patients 108(55.1%) were females and 88(44.9%) were males. And 31(15.8%) patients were in neurology care group, 10(5.1%) patients were in intensive care unit, 43(21.9%) patients were in chronic care group, 112(57.1%) patients were in acute care group. 125(63.5%) had duration of hospital stay 6days-1month and 71(36.8%) had duration of hospital stay.

Braden scale

Table 1. Descriptive statistics of sensory perception & mobility

	Sensory Perception		Mobility	
	Frequency	Percent	Frequency	Percent
Completely Limited	138	70.4	153	78.1
Very Limited	38	9.4	37	18.9
Slightly Limited	17	8.7	6	3.1
No Impairment	3	1.5		
Total	196	100	196	100

Table 2. Descriptive statistics of activity

Activity		
	Frequency	Percent
Bedfast	186	94.9
Chair fast	10	5.1
Total	196	100

Among 196 stroke patients 53(27%) were constantly moist, 35(17.9%) were very moist,

45(23%) were occasionally moist and 63(32.1%) were rarely moist.**(Figure 1)**

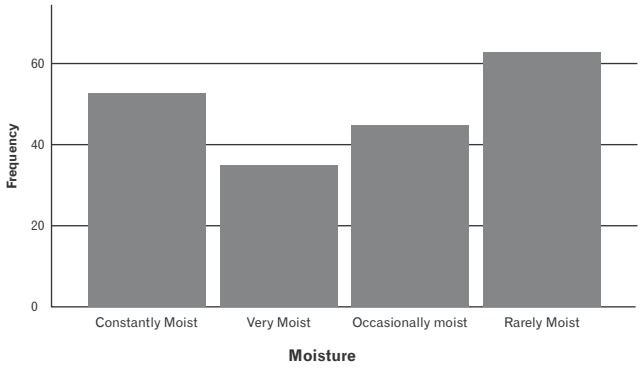


Figure 1: Descriptive statistics of moisture

Among 196 stroke patients 147(75%) were without continence, 32(16.3%) were occasionally feel incontinence, 6(3.1%) usually had incontinence and 11(5.6%) were with double incontinence.**(Figure 2)**

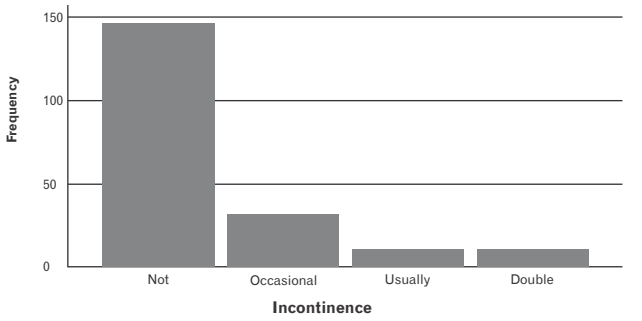


Figure 2: Descriptive statistics of incontinence

Among 196 stroke patients 165(84.2) had very poor nutrition, 19(9.7%) had probably inadequate nutrition and 12(6.1%) had adequate nutrition.**(Figure 3)**

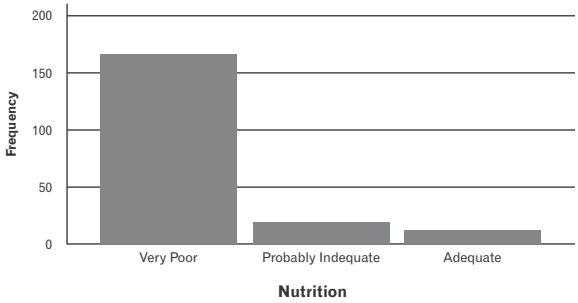


Figure 3: Descriptive statistics of nutrition

Among 196 stroke 193(98.5) were with potential problem of friction and share, 2(1%) had potential problem and 1(0.5%) were with no apparent problem **(figure 4)**

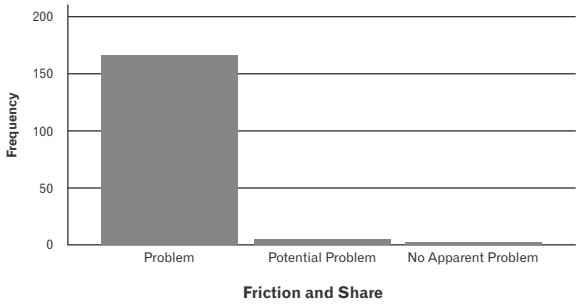


Figure 4: Descriptive statistics of friction and share

Skin Observation

Table 3. Descriptive statistics of most severe pressure ulcer

Most Severe Pressure Ulcer		
	Frequency	Percent
None	137	69.9
Non Blench able erythema	20	10.2
Blister/ Abrasions	9	4.6
Superficial Ulcer	18	9.2
Deep Ulcer/ Necrosis	12	6.1
Total	196	100

Table 4. Descriptive statistics of location of most severe pressure ulcer

Location Of Most Severe Pressure Ulcer		
	Frequency	Percent
Sacrum	37	18.9
Heel	8	4.1
Hip	7	3.6
Others	8	4.1
Total	60	30.6

DICUSSION

A study was conducted by Dinkie Tadele Bereded et al (2018) and 355 patients admitted in hospital were included in study. Their results shows that 51.2% of respondents were females mean of age were 37.2% and majority of them fall in age range of 33-54%. Prevalence of pressure ulcers were 14.9% and most location was sacrum.46.8% of respondents had impairments in their sensory perception and 47.3% walk frequently.42.2% had

no mobility limitations. 57.7% were rarely moist 60.6% had no problem in their friction/shear.31.3 had probably inadequate nutrition. Most of studies not include information about repositioning and this study have information about repositioning in bed and in chair which are as Among 196 stroke patients 85(43.4%) repositioned irregularly, 92(46.9%) repositioned after every 2 hours, 16(8.2%) repositioned after every 3 hours and 3(1.3%) repositioned after every 4 hours.[12]

A research conducted by Rini Riandini et al describes pressure ulcers prevalence. Majority of the participants were female (53.3%), frequently aged greater than 65 years (56.7%), a small ratio of participants had a history of bed rest (3.3%), Site of pressure ulcers was on the Coccygeal bone (3.3%).Most patients got a alteration of position (56.7%), all participants expected nutritional care (100%), nearly all patients did not get fitness instruction (80%), nearly all respondents did not use pillow under the heel (83.3%), all respondents did not use oil (100%), all respondents did not practice soothing cream (100%), all respondents did not used massage (100%), and altogether respondents did not usage an pressure injury mattress (100%).As in my study Among 196 stroke patients 13(6.6%) are in age limit 19-39 years, 56(28.6%) in age limit 40-59, 64 (32.7%) are in age limit 60-69, 41 (20.9%) are in age limit 70-79, 17 (8.7%) are in age limit 80-89 and 5(2.6%) are older than 89 years of age Among 196 stroke patients 60(30.6) had most severe pressure ulcers, 37(18.9%) had most severe pressure ulcer at sacrum, 8(4.1%) on heel, 7(13.6%) at hip, 18(4.1%) at other areas.[13]

Chophaka Suttipong and Siriorn Sindhu et al conducted a research to calculating reasons of pressure sores in older Thai CVA patients in city populations entire amount of CVA patients in this study was 168 with the common being female (60.1%). The ages ranged from 60–93 years .The most frequent position for the pressure injuries were the trochanters (27.4%), the sacrum (19.6%) and the coccyx (10.7%).Most of the respondents had minor restrictions in sensory awareness (60.1%), occasional skin dampness (39.3%), resistance and shearing potential problem (64.3%), bedfast activity (63.7%), slight mobility restriction (47.6%) and very poor nutrition (43.5%). Most studies not explained the nature of most severe pressure ulcers and preventive equipment. Whereas my study explained this as Among 196 stroke patients 137(69.9%) had no most severe pressure ulcers, 20(10.2%) had non-blench able erythema, 9(4.6%) had blisters/abrasions, 18(9.2%) superficial ulcer and 12(6.1%) had deep ulcers. Among 196 stroke patients 181(92.3%) had no special equipment in bed and 15(7.7%) non-powered devices on bed.[14]

CONCLUSION

Among 196 patients majority were females and have completely limited mobility. Mostly inadequate nutrition, most patients were rarely moist. Location of most severe pressure ulcers was sacrum and patients were usually not receiving any preventive equipment. Patients have completely limited mobility and majority have potential problem with friction/shear. Repositioning of patients was irregular.

LIMITATIONS

- Study was conducted in only one city.
- Sample size made this study limited.
- Shortage of time was also a limitation for this study.
- Ethical complications were also faced.

Recommendation

- A large sample size should be included.
- Stroke patients should reposition after every two hours.

Acknowledgement

I am thankful to Allah Almighty who has blessed with completion of this piece of work. My immense Darood to our Prophet (PBUH), His life has presented a complete, ultimate, and perfect guide for us. I pay my gratitude to our honorable Dean Dr. Syed Amir Gilani, and Head of department DR. ASHFAQ AHMAD. I am thankful

to DR.FAIZA SHARIF and DR.AROOJ RAZA for guiding, supporting, and facilitating me throughout this project.

REFERENCES

1. Butcher M, Thompson G. Dressings can prevent pressure ulcers: fact or fallacy? The problem of pressure ulcer prevention. Wounds uk. 2009;5(4):80-93.

2. Bergstrom N, Braden B. A prospective study of pressure sore risk among institutionalized elderly. Journal of the American Geriatrics Society. 1992;40(8):747-58.

3. Galván-Martínez IL, Narro-Llorente R, Lezama-de-Luna F, Arredondo-Sandoval J, Fabian-Victoriano MR, Garrido-Espindola X, et al. Point prevalence of pressure ulcers in three second-level hospitals in Mexico. International wound journal. 2014;11(6):605-10.

4. Pancorbo-Hidalgo PL, Garcia-Fernandez FP, Lopez-Medina IM, Alvarez-Nieto C. Risk assessment scales for pressure ulcer prevention: a systematic review. Journal of advanced nursing. 2006;54(1):94-110.

5. Minnerup J, Schmidt A, Albert-Weissenberger C, Kleinschnitz C. Stroke: Pathophysiology and Therapy2013. 1-91 p.

6. Lee S-Y, Chou C-L, Hsu SP, Shih C-C, Yeh C-C, Hung C-J, et al. Outcomes after stroke in patients with previous pressure ulcer: a Nationwide matched retrospective cohort study. Journal of Stroke and Cerebrovascular Diseases. 2016;25(1):220-7.

7. Batticaca FB. Asuhan keperawatan pada klien dengan gangguan sistem persarafan. Jakarta: Salemba Medika. 2008.

8. Mubarak WI, Indrawati L, Susanto J. Buku Ajar Ilmu Keperawatan Dasar. Jakarta: Salemba Medika. 2015.

9. Mutia L, Pamungkas KA, Anggraini D. Profil Penderita Ulkus Dekubitus yang Menjalani Tirah Baring di Ruang Rawat Inap RSUD Arifin Achmad Provinsi Riau Periode Januari 2011-desember 2013. Jurnal Online Mahasiswa (JOM) Bidang Kedokteran. 2015;2(2):1-11.

10. Catherine VanGilder M, Amlung S, Harrison P, Meyer S. Results of the 2008–2009 International Pressure Ulcer Prevalence™ Survey and a 3-year, acute care, unit-specific analysis. Ostomy Wound Manag. 2009;55:39-45.

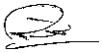
11. Campbell KE, Woodbury MG, Houghton PE. Implementation of best practice in the prevention of heel pressure ulcers in the acute orthopedic population. International wound journal. 2010;7(1):28-40.

12. Bereded DT, Salih MH, Abebe AE. Prevalence and risk factors of pressure ulcer in hospitalized adult patients; a single center study from Ethiopia. BMC research notes. 2018;11(1):847.

13. Riandini R, Emaliawati E, Mirwanti R. PREVALENCE, PREVENTION, AND WOUND CARE OF PRESSURE INJURY IN STROKE PATIENTS IN THE NEUROLOGY WARD. Belitung Nursing Journal. 2018;4(6):581-90.

14. Suttipong C, Sindhu S. Predicting factors of pressure ulcers in older Thai stroke patients living in urban communities. Journal of clinical nursing. 2012;21(3-4):372-9.

AUTHORSHIP AND CONTRIBUTION DECLARATION

Sr. #	Author's Full Name	Contribution to the paper	Author's Signature
1	Iqra Karamat	Data collection, article writing thesis writing	
2	Shahbaz Ahmad	Article writing thesis writing	
3	Arooj Raza	Supervised the whole thesis process proof reading	
4	Ashfaq Ahmad	supervised the whole thesis process	
5	Mam Sadia	Biostatisticion statestical analysis