

## The Effect of Provision of Right and Left Mobilization Against Prevention of Decubitus Ulcers in Stroke Patients

Tenriwati <sup>1\*</sup>, Asnidar <sup>2</sup>

*Departemen of Child Nursing and Maternity, Stikes Panrita Husada Bulukumba, Indonesia<sup>1</sup>*

*Departemen of Child Nursing and Maternity, Stikes Panrita Husada Bulukumba, Indonesia<sup>2</sup>*

Corresponding Autor : [Tenriwatisalala@Yahoo.com](mailto:Tenriwatisalala@Yahoo.com) \*

### ABSTRACT

In the world, the number of stroke sufferers who experience pressure ulcers from year to year has increased. Based on data from the World Health Organization (WHO) in 2008 the number of stroke sufferers hospitalized with decubitus ulcers 3-10% and 2.7% has the opportunity to form new ulcers. The incidence of decubitus ulcers in Indonesia is very high compared to other countries. The purpose of this study was to determine whether there is an effect of giving the right and left oblique mobilization to stroke patients in the inpatient. This study uses a quasi-experimental design with a pre-test and post-test approach only with control groups. The collected data were analyzed by Wilcoxon's Marginal Homogeneity test. The results of the analysis in the intervention group were p values 0.046 ( $<0.05$ ) which showed that there was an effect of giving the right and left oblique mobilization to the prevention of pressure sores in stroke patients, the results of the analysis in the control group were p values = 0.003 ( $<0.05$ ) which shows there is no effect of giving the right and left sloping mobilization to the incidence of pressure sores in stroke patients and the results of the analysis in the intervention group and the control group obtained p-value of 0.004 ( $<0.05$ ) which indicates there is a significant difference in the proportion of ulcer events decubitus in respondents who were given right and left oblique mobilization with respondents who were not given right and left oblique mobilization. The suggestion from researchers is that this research can add to the treasury of science and can be used as reading material in the development of science, and become information material for health workers for the future daily observation and prevention measures for pressure ulcers can be increased again.

**Keywords:** Mobilization of Right, Left Slant, Decubitus Ulcer, Stroke

### INTRODUCTION

Stroke is a disease or functional brain disorder in the form of nerve paralysis (neurologic deficit) due to obstruction of blood flow to the brain. Stroke is simply defined as a brain disease due to the cessation of blood supply to the brain due to ischemic obstruction / hemorrhage or hemorrhagic stroke (Junaidi., 2013). Based on data from the World Health Organization (WHO), around the world in 2002 an

estimated 5.5 million people died from strokes and it is estimated that in 2020 heart disease and stroke are the main causes of death in the world (Projodisastro, 2009 in Sinaga and Bu'ulolo., 2010) .

In Indonesia, around 800-1000 cases of stroke occur every year. Based on the 1995 Household Health Survey and 2001 Surkesmas the main causes of death were circulatory system diseases (24.4%). While the report of the Directorate General of Medical Care of the Republic of Indonesia Ministry of Health (in Sinaga and Bu'ulolo., 2010) the main cause of death in hospitals is stroke. The incidence of stroke according to baseline data is 63.52 per 100,000 population in the age group of more than 65 years. Roughly every day there are two Indonesians who have a stroke. Stroke prevalence is based on the highest diagnosis of health workers in North Sulawesi (10.8 ‰), followed by DI Yogyakarta (10.3 ‰), Bangka Belitung and DKI Jakarta 9.7 per mile each. The prevalence of stroke based on diagnosed health and highest symptoms is found in South Sulawesi (17.9 ‰), DI Yogyakarta (16.9 ‰), Central Sulawesi (16.6 ‰), followed by East Java at 16 per mile (Risksedas, 2013).

This stroke is increasingly becoming a serious problem faced throughout the world. That is because sudden stroke can cause death or physical and mental disability both in the productive age and old age. The incidence of stroke is increasing and sufferers are not only parents, but also those who are young who are less than 40 years old (Junaidi., 2011). Based on data from the medical records of RSUD H.A. Sulthan Daeng Radja Bulukumba Regency The number of stroke patients treated in 2016 starting from January to March totaled 25 people. Decubitus ulcers are a serious problem that often occurs in patients who experience impaired mobility and bed rest more than one week as in stroke patients (Yusuf., 2011). Decubitus ulcers pose a threat in health care because the incidence is increasing day by day. The incidence of pressure ulcers in the United States, Canada, and England is 5% - 32% (Spilsbury et al., 2007). Pelham (2007) reported that the costs incurred by the United States for the treatment of pressure ulcers in hospitals increased 50% from the previous budget (Kim et al., 2009 in Tarihoran., 2010).

The prevalence of pressure ulcers in European countries ranges from 8.3% - 22.9% (European Advisory Panel survey (EPUAP in young, 2004). 10.5% - 45%. Based on a study, the incidence of pressure ulcers in international studies (1.9-63.6%), other ASEAN (Japan, Korea, China) 2.1-18% in Indonesia is quite high at 33.3% (Suriadi,

2007). According to Subandar (2008), research results in the United States show that stroke patients treated in hospitals suffer from pressure ulcers 3-10%, and 2.7% are likely to form new pressure sores. From the results of the research above, the increase in pressure sores continues to occur up to 7.7-26.9%. Then Mukti (2005) adds that the prevalence of pressure sores in the United States is quite high so that it gets the attention of health workers. Research shows that the prevalence of pressure sores varies, but it is generally reported that 5-11% occurs in the acute care setting, 15-25% in the long term care setting, and 7-12% in the home care setting (home health care). In Semarang City Hospital, the prevalence of pressure sores continues to increase every year in 2011 there were 9 patients with pressure sores and in 2012 14 patients with pressure sores (WHO., 2010 in Aini and Purwaningsih., 2013).

The Ministry of Health of the Republic of Indonesia (2001) sets quality targets where non-pressure patients must be 0% (Lumenta., 2008), adopted from indicators of hospital service quality according to the World Health Organization (WHO). The incidence of pressure sores in Indonesia is very high compared to other countries. Therefore it is very reasonable, if the problem of pressure ulcers needs special treatment (Tarihoran, 2010). Right-tilted and left-tilted positioning are very familiar forms of nursing intervention and are established in the context of prevention of pressure sores, especially in patients with immobilization. Immobilization is the most common manifestation in patients with neurological disorders such as stroke, one of which is impaired motor function (Tarihoran., 2010). From the data that I got according to health workers the incidence of pressure ulcers in hospitals often occurs in patients with a diagnosis of a disease that causes immobilization as in stroke patients. Recognizing the importance of adjusting the right and left tilt position in the prevention of pressure sores in patients who must be treated more than a week in the hospital, therefore prevention of pressure sores should be done as early as possible to reduce the increased prevalence of pressure sores. For this reason researchers are interested in further researching about the effect of right and left oblique mobilization on the prevention of pressure sores in hospital inpatients. H. A. Sulthan Daeng Radja of Bulukumba Regency

### **MATERIAL AND METHODS**

This type of research uses quasi-experimental research (quasi experiment) using a research design with pre and post test only with control group, in this design the study

consisted of two groups, namely the intervention group and the control group. The intervention group was given treatment, while the control group did not receive treatment (Dharma, 2011).

The population in this study were 25 stroke patients who were treated from April to June 2016 in the inpatient room of RSUD. H. A. Sulthan Daeng Radja of Bulukumba Regency. The sampling collection technique in this study is consecutive sampling. Consecutive sampling is the selection of samples by specifying subjects that meet the research criteria included in the study until a certain period of time, so that the number of clients needed is met (Sastroasmoro & Ismail, 1995 in Setiadi 2013), the number of samples in this study were 20 stroke patients who were treated in the inpatient hospital H.A.Sulthan Daeng Radja Bulukumba Regency. Data collection instruments in this study provide treatment / intervention in the form of providing right and left oblique mobilization. The measuring instrument used in data collection is the observation method. Bivariate analysis is performed to see the relationship of each independent variable and the dependent variable. Bivariate analysis in this study was conducted to determine the effect of providing right and left oblique mobilization with prevention of pressure ulcers in stroke patients by pretest and posttest. This analysis uses the Wilcoxon Marginal Homogeneity test statistical test.

## RESULTS

**Table 1. Distribution of Frequency of Respondents by Age of Intervention group**

Characteristic	n	Percentage (%)
<b>Age</b>		
65-70	3	30,0
71-75	2	20,0
76-82	5	50,0
<b>Amount</b>	<b>10</b>	<b>100</b>

Based on data from Table 1, the frequency distribution of respondents in the intervention group in the Inpatient Room of RSUD.H.A.Sulthan Daeng Radja Kab. Bulukumba in June-July 2016 showed that of the 10 respondents in the intervention group that were studied the most were found at the age of 76-82, 5 respondents (50.0%).

**Table 2. Distribution of Frequency of Respondents by Gender Intervention group**

Characteristic	n	Percentage (%)
<b>Gender</b>		
Male	7	70,0
Female	3	30,0

<b>Amount</b>	<b>10</b>	<b>100</b>
---------------	-----------	------------

Based on data from Table 2, the frequency distribution of respondents in the intervention group in the Inpatient Room of RSUD.H.A.Sulthan Daeng Radja Kab. Bulukumba in the months of June-July 2016 showed that of the 10 respondents in the intervention group studied most were found in males, 7 respondents (70.0%).

**Table 3 Distribution of Frequency of Respondents by Age of Control Groups**

Characteristic	n	Percentage (%)
<b>Age</b>		
65-70	3	30,0
71-75	2	20,0
76-82	5	50,0
<b>Amount</b>	<b>10</b>	<b>100</b>

From table 2, the distribution of the frequency of the control group respondents in RSUD.H.A.Sulthan Daeng Radja, shows that of the 10 respondents in the control group studied most were found at the age of 76-82 5 respondents (50.0%).

**Table 4 Distribution of Frequency of Respondents by Gender Control Group**

Characteristic	n	Percentage (%)
<b>Gender</b>		
Male	7	70,0
Female	3	30,0
<b>Amount</b>	<b>10</b>	<b>100</b>

Based on data from Table 4, the frequency distribution of control group respondents in the Inpatient Room of RSUD.H.A.Sulthan Daeng Radja Kab. Bulukumba in the months of June-July 2016 showed that of the 10 respondents in the intervention group studied most were found in males, 7 respondents (70.0%).

**Table 5. Distribution of the Right and Left Tilting Mobilization for the Prevention of Decubitus Ulcers**

Pre Test	Post test				Amount		P Value
	There is an ulcer		There is no ulcer		n	%	
	n	%	n	%			
There is an ulcer	0	0,00	0	00,0	0	0,00	<b>0,046</b>
There is no ulcer	1	10,0	9	90,0	10	100	
<b>Amount</b>	<b>1</b>	<b>10,0</b>	<b>9</b>	<b>90,0</b>	<b>10</b>	<b>100</b>	

Based on data from table 5 above shows that the data before the intervention was given to stroke patients there was no pressure ulcer. After intervention, 1 respondent (10.0%) developed grade 1 pressure sores. Based on the analysis using the Marginal Homogeneity Test statistic, the Asymp value was obtained. Sig of 0.046. The significant value <0.046 indicates less than 5%, namely 0.05. Then it can be stated there is an

influence of right and left oblique mobilization on the prevention of pressure sores in stroke patients in the inpatient room of RSUD.H.A.Sulthan Daeng Radja Kab. Bulukumba

**Table 6. Distribution of Provision of Mobilization of Right and Left Slant Against Prevention of Decubitus Ulcers**

Pre Test	Post test				Amount		P Value
	There is an ulcer		There is no ulcer		n	%	
	n	%	n	%			
There is an ulcer	0	0,00	0	0,00	0	0,00	
There is no ulcer	10	100	0	00,0	10	100	
<b>Amount</b>	<b>10</b>	<b>100</b>	<b>0</b>	<b>00,0</b>	<b>10</b>	<b>100</b>	<b>0,003</b>

The results of the analysis of the incidence of pressure sores were found that there were 10 respondents (100%) in the control group had pressure sores. Statistical test results obtained asymp values. Sig of 0.003 concluded that respondents who were not treated right and left tilt had a chance of developing pressure ulcers compared to respondents who were treated right and left tilt.

**Table 7 Distribution of the Right and Left Slope Mobilization for Prevention of Decubitus Ulcers**

		Post test control				Amount		P Value
		There is an ulcer		There is no ulcer		n	%	
		n	%	n	%			
Post test	There is an ulcer	1	10,0	0	0,00	1	10,0	
Intervention	There is no ulcer	9	90,0	0	0,00	9	90,0	
<b>Amount</b>		<b>10</b>	<b>100</b>	<b>0</b>	<b>0,00</b>	<b>10</b>	<b>100</b>	<b>0,004</b>

Based on data from table 7 above shows that the number of respondents who experienced decubitus ulcers was 1 respondent (10.0%) in the intervention group while, in the control group were 10 respondents (100%) who had decubitus ulcers. Based on the analysis using the Marginal Homogeneity Test statistic, the Asymp value was obtained. Sig is 0.004. The significant value <0.004 indicates less than 5%, namely 0.05. Then it can be stated that there is a significant difference in the proportion of cases of pressure ulcers between patients who are given intervention and patients who are controlled.

## DISCUSSION

Based on the results of research that has been done, from 10 respondents it was found that the incidence of pressure sores before given right and left slant mobilization there were no pressure sores on respondents but after giving the right and left slant mobilization of respondents who experienced decubitus ulcers were 1 respondent (10,

0%) with a value of  $p = 0.046$ . This is due to the importance of giving right and left oblique mobilization towards the prevention of pressure sores in stroke patients. Based on the theory put forward by Tarihoran (2010) that Tom Deflor who has examined ten different positions when the patient is in bed, from the ten positions found that the most minimal pressure is achieved when the right and left tilted position.

The results of this study are in line with the results of a study conducted by Dame Elysabeth Tutiarnauli Tarihoran (2010) with the research title "Effect of 30 Degree Tilting Position on the Occurrence of Grade 1 (Non-Blanchable Erythema) Wounds in Stroke Patients at Silom Hospitals" position with the occurrence of grade 1 (Non-Blanchable Erythema) pressure sores in stroke patients at the hospital silom. Stroke patients experience long-term motor deficits that will affect its mobilization function. Decreased mobilization and even immobilization experienced by patients causes patients to have to lie in bed in a long time. The impact of a stroke is pressure sores, or emphasis on areas that come in contact with the surface of the bed. This continuous bed rest allows emphasis on certain areas that can trigger ischemic tissue to eventually cause pressure ulcers. Decubitus is one of the greatest dangers in bed rest. Decubitus ulcers as one of the quality of nursing services can be prevented by giving right and left oblique mobilization (Rismawan., 2014).

In this study, researchers can assume that the condition of patients with long bed rest, will cause emphasis on the body. This suppression will cause a lack of blood supply to the affected area so that it triggers the occurrence of pressure sores by giving right and left sloping mobilization to stroke patients is an action that can prevent the occurrence of pressure sores. Based on the results of research that has been done, from 10 respondents in the control group it was found that there were no patients who had pressure sores in the pre test and in the post test there were 10 respondents (100%) with a  $p$  value = 0.003. This is due to pressure on parts of the body that are easily affected by pressure sores. The results of this study are in line with the results of a study conducted by Dame Elysabeth Tutiarnauli Tarihoran (2010) with the research title "Effect of 30 Degree Tilting Position on the Occurrence of Grade 1 (Non-Blanchable Erythema) Wounds in Stroke Patients at Silom Hospitals" Non-Blanchable Erythema) in the control group were 6 (37.5%) respondents while in the intervention group were 1 (5.9%) respondents. This means that respondents who were not treated with a 30

degree tilt position have a chance for the occurrence of pressure sores compared to respondents who were given a 30 degree tilted position treatment.

Pressure sores are recognized as one of the problems that must be prevented because they have an impact on sufferers, various effects that arise are the wounds felt very painful by the patient to lie down or sit in the desired attitude on pressure sores that begin to develop red skin and skin can experience tissue damage so that it can disrupt the patient's body image, and in the advanced stage of pressure sores will appear deeper ulcers. Positioning is the most valuable component of the prevention of pressure ulcers and should be carried out as effectively and efficiently as possible (Tarihoran, 2010). In this study, researchers can assume that decubitus ulcers are a very fast and very dangerous complication in stroke patients to prevent this so that independent measures can be performed without using fees by doing right tilting and left tilting to protect the area affected by pressure from pressure sores.

### CONCLUSIONS

There is an effect of not doing the right and left sloping mobilization to the incidence of pressure sores in stroke patients in the inpatient room of RSUD.HA.Sulthan Daeng Radja Kab. Bulkukumba with a value of  $p = 0.003$ . There is a significant difference in the proportion of cases of pressure ulcers between patients who are given intervention and patients who are controlled with a value of  $p = 0.004$  meaning that respondents who are not treated right and left side have a higher chance of developing pressure ulcers compared with respondents who are treated obliquely right and left tilt, 3. So that the results of this study can provide information to health workers so that in the future daily observations and preventive measures for pressure sores need to be increased again in order to detect the risk of pressure sores.

### REFERENCES

- AB Syamsuddin et al. (2015). *"Pedoman praktis metodologi penelitian internal (Pendekatan kualitatif, kuantitatif, pengembangan dan mix-method)"*. CV.Wade Group : Ponorogo indonesia.
- Aini Faridah, Purwaningsih Heni (2013) *"Pengaruh alih baring terhadap kejadian dekubitus pada stroke yang mengalami hemiparemis di Ruang Yudistira RSUD kota Semarang"*. Hal 1-4.
- Astuti Dwi, RM Anni, Syariffuddin Rendi Ary (2012). *"Hubungan mobilisasi dengan proses penyembuhan luka atau ulkus dekubitus di RSUD.RA. Kartini Jepara"*. Hal 1-7.



- Dharma, Kelana Kusuma. (2011). *Metodologi penelitian Keperawatan*. TIM.
- Junaidi Iskandar (2011). *"STROKE, waspadai ancamannya"* ed 1. Andi Offset: Yogyakarta.
- Kuraesin Titin, (2007). *"Mengenal luka dan penanganannya"*. PT karya kita : Jakarta timur.
- Nurarif Amin Huda, Kusuma Hardi (2015). *"Aplikasi asuhan keperawatan berdasarkan diagnosa medis dan nanda nic-noc"* ed 1. Mediacion Publisihing : Jogjakarta
- Rahmawati Aziz, Afrida (2014). *"Hubungan antara pengetahuan dan perilaku pasien yang dirawat lebih dari tujuh hari dengan pencegahan dekubitus di RSUD.Salewang Maros"* Hal 1-4.
- Rismawan Wawan (2014). *"Hubungan tingkat pengetahuan keluarga klien tentang pencegahan dekubitus terhadap kejadian dekubitus pada pasien bedrest total di RS Dr. Soekardjo Tasikmalaya kota Tasikmalaya"*. Hal 1-4.
- Setiadi. (2013). *Konsep dan Praktik penulisan riset keperawatan*, ed 2. Graha ilmu: Yogyakarta.
- Tarihoran, Dame Elysabeth et al (2010). *"Penurunan Kejadian Luka Tekan Grade 1 (Non Blanchable erythema) pada klien stroke melalui posisi miring 30 derajat"*. Hal 1-6.