

# *The Effects of Back Massage to Prevent Decubitus in Patients with Bedrest in Meuraxa Hospital Banda Aceh and Elderly Nursing Home*

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**Abstract**—Decubitus is a serious problem, which experienced by patients during hospitalization with the weaknesses and limitation of movement resulted by illness. Back massage is the one of forms in nursing actions which considered very effective to prevent decubitus. The purpose of this research is to identify back massage to prevent decubitus. The research was conducted at Meuraxa hospital and Elderly Nursing Home, Banda Aceh 2012. This research is begun from 13th September to 20th October 2012 at Meuraxa general hospital and Werda Institution Banda Aceh. The research design is a quantitative research by quasi-experimental design and pretest-protest group. Group intervention plan and group control bivariate analysis with t-test independent and t-test dependent. The samples were 30 patients which taken by sampling non probability with purposive sampling type. The patient is received back massage action during 5 days. The research evaluation is doing after 5 days by accessing the degree of decubitus incidence. The result of research is show the average value of decubitus degree before the intervention is 4,73, deviation standard 0,45. The measure mean after intervention obtained an average 5,93, deviation standard 0,25. Here is visible the mean value which difference between the first and second measurement 1,20, deviation standard 0,41 and the result of statistic test is ( $p=0.000$ ) and it can be concluded there was significant effect decubitus degree before and after back massage action on the bed rest patient. The recommendation of result research is back massage exercise for bed rest patients applied for bed rest patient to prevent the decubitus and complication.

**Keywords:** *massage; decubitus; bed rest*

## I. INTRODUCTION

Decubitus is one of the greatest dangers on bedrest, in daily life the people mentioned it by “sleep effect”. The sore of decubitus has been mentioned because there is a pressure on the skin. And sooner will be seen on the place which get a pressure and the skin’s color is white. If the pressure just happens for a while, there are no adversely consequences for blood flow. And the pressure which happened long time, that will be show some problem in the circulation of nutrient and the acid which should be channeled to the part of the skin.

And the place which gets the pressure, it resulted on the cells which do not get enough food and the acid will die slowly, and here is show the sore of decubitus [1].

The decubitus sores often plagued to the patient with bedrest. Bed rest is where the patient settled on bed for long periods of time and they must to take of rest in bed. In fact a bed rest is not something which done by voluntary, but patient do a bed rest as an effect of variety physical disruption (movement, breathing, and nervous control). The patient who were treated at the hospital or in Panti Werda with a variety of diseases it required to take bed rest and it can be risked to the decubitus incidence which caused by pressure on the skin of muscles and bone in elderly, sometimes there happens a decline sensory function and that will caused the formation of the sores which happen caused the often pressure and it referred by decubitus.

Allman research said that the prevalence of decubitus were reported from hospitals are in the range between 3%-11% [2]. Decubitus is one of serious problems in families healthy. AHCPR (Agency for Health Care Policy and Research), 1994, it was suggested when the decubitus occurs, the periods of treatment and hospitalization cost will be increase [2]. Therefore, the measurement of decubitus prevention and treatment should implement optimally to the patients. It is expected after the research, the result are expected to improve the science of technologies for nurses, especially for institutions which give or create the operational standards of care to the patients with bed rest and there the decubitus does not happens anymore.

The data which contained in Indonesian hospitals is the patient with treated in the hospital 80% were required to complete the bed rest, cause of it can be risk to the decubitus and while the data obtained from Meuraxa general hospital, Banda Aceh which said that the incidence of patient with bed rest, since 2010 to 2011 is around 240 patients. And the

patients with bed rest in Panti Werda were 20 peoples. Because the prevalence of patient with decubitus is high, therefore, the authors are interested to the research by the title “back massage effect on the prevention of decubitus in patient with bed rest at Meuraxa Hospital and Panti Werda Banda Aceh”.

#### THE FORMULATION OF THE PROBLEM

All patients which treated by hospital and also the elderly in Panti Werda they are experiencing by weakness which it required to do bed rest on the bed which allowed by pressure sores. If the back and skin is constantly being presses without providing the nursing intervention,like a back massage which considered very effective for decubitus reduced. Then the patient will experience the sores or blisters caused reduction in circulation which caused by pressure and called by decubitus.

In addition to the problem which mentioned above, massage is the priority action performed to avoid injury, infection and disability, complication sand also permanent of disability.The action done to acquire the patient is recover and healthy going,also good blood circulation and prevents the infection caused by injury.With there is hope all the patient is recovering and able to perform daily activities and also productive. Including to the formulation of the problem, there we get the question of research “How the effect of back massage for decubitus prevention to the patient with bed rest in the Meuraxa hospital and PantiWerda Banda Aceh in 2012”

#### THE PURPOSE AND BENEFITS OF RESEARCH

1. The purpose  
The purpose of this research is to identify the effect of massage for decubitus prevention to the patient with bed rest at the Meuraxa hospital and PantiWerda Banda Aceh in 2012.
2. The benefit of research
  - a. The benefits for nursing care in hospitals to give the positive feedback and information for hospitals,especially for nurse to improve and promote the back massage action, and there also create a SOP (Standard Operating Procedure).
  - b. The benefits for Panti Werda to become the standard operating procedure of back massage at

the room for the elderly who experienced by bed rest.

## II. THE CONCEPT AND METHODS OF RESEARCH

### A.THE CONCEPT OF DECUBITUS

Decubitus called also by pressure sores or bed sores, it is the lesions which happen caused damaged of epidermis,dermis and sometimes to the subcutaneous cells and underlying bone. This situation caused by pressure on the area by continuously till there endanger the disruption of the local blood circulation.If this persists, it can lead to insufficiency of blood flow,anoxia or cells’s ischemic and the last it can lead to the death of cell. [3].

Decubitus is the damage of anatomical structures and function of normal skin which caused by external pressure and associated with the herniated discs and does not cured by the order and usual time.This disruption happens to the individuals which stay in a chair or bed,it often happensamongincontinesia,malnutrition or the individual who get the difficulty to feeding themselves and sustained by disruption of the level of consciousness [2].

### B.THE CONCEPT OF BED REST

This is a condition where the patient should take a rest on bed,does not more actively caused by the various of diseases or interference to the instrument or organ (impairment) which the physical or mental.It also can be interpreted as the state which does not move or the continuous on bed rest for 5 days or more which happens caused the decrease of physiological function [4].

### C. THE BACK MASSAGE

Back massage is the one of action to give a comfortable which the patient is done.This action can be relieve a tension, improve the circulation and relax the client.Because the effect on the circulation,the back massage is especially helpful for preventing the pressure sores (decubitus) on the bed rest’s patient.This action allowed for nurse to check the client’s skin and see the area of redness which it possible to become the decubitus.If the skin is redness,the massage action include to the further damage.The best time to give the back massage is after a shower or before the client is going to rest or sleep.To stimulate a blood circulation to

the back area through the massage, to improve the physical and mental relaxation, to reduce an insomnia [5].

### III. THE METHODS RESEARCH

#### THE DESIGN OF RESEARCH

The research is quantitative research by using the quasi experimental of research design, control group pretest-pretest design (group intervention) and group control, its purpose to determine the effect as a result of a particular treatment [6]. The result of the treatment expected here to change or influence over the other variable than the result of this instrument will be compared with the measurement both before and after the intervention [7]. The population of this research is all the patient with ischemic stroke who were treated in the ward (inpatient) of Meuraxa hospital and elderly in with disorder of the movement in Panti Werda Banda Aceh. The technique of sampling in this research was the purposive sampling which each sample is come to the hospital and comply the criteria of sampling, then will be sampled until all the sample is filled or complete. The research was done in the Meuraxa Hospital and Panti Werda Banda Aceh. The research has begun from 13<sup>th</sup> of September to 20<sup>th</sup> of October 2012.

#### THE INSTRUMENT OF RESEARCH

The data of this research was collected from respondents, the instrument which used is assessment format with some question about the characteristics of the respondents, for instance; age, sex, risk factors, then observe the level of consciousness. The instrument of the research which collected is used to the data to view the last value or the value of evaluation in patient with bed rest by calculating the deviation of decubitus degree between the first and the sixth day which it become the advancement value the decubitus prevention degree.

### IV. THE RESULT AND DISCUSSION OF RESEARCH

In this chapter described the result on the effect of back massage to prevent the decubitus in patient with bed rest at Meuraxa hospital and Panti Werda Banda Aceh. Including to the obtained data in September to October 2012, it has been investigated by 30 respondents, which 15 respondent of intervention club and 15 respondent of control club. The intervention were given for 5 days. The effect of back massage which assessed on the pretest and posttest is to compare the result of the pretest and posttest the result of this research can be describe the following below :

#### A. UNIVARIATE ANALYSIS

The effect of exercise before and after the exercise is done is: it is known that the age of respondents 25-54 years of age is 7 respondents (46,7%) more than respondent >55 years of age which as 6 respondents (40%) and the age of respondent <25 years of age is 2 respondents (13,3%) in the group intervention. While in the group control, it was the age of respondents 25-54 years of age is 9 respondents (60%) more than the age of respondents >55 years of age as 5 respondents (33,3%) and the age of respondents <25 years of age is 1 respondent (6,7%).

It is known that the gender of female respondents is 9 respondents (60%) more than a male respondents as many 6 respondents (40%) in the group intervention. While in the group control is the a female gender is 11 respondents (73,5%) more than male respondents as many 4 respondents (26,7%).

It known that the most of risk factor on the patient with bed rest in the group intervention is the another disease like a surgery and osteoporosis, they are: 8 respondents (83,3%) next, the the risk factor of heart disease is 6 respondents (40%) and stroke is 1 respondent (6,7%). While in the group control, the most risk factor is also the another disease as many as 6 respondents (40%), there is the heart disease by 4 respondents (26,7%) and diabetes mellitus by 4 respondents too (26,7%) and there is a stroke disease by 1 respondent too (6,7%).

It known that the most level of consciousness in the group intervention is : the level of control mentis consciousness as many ( respondents (60%), samnolen by 3 respondents (20%) letergis by 2 respondents (13,3%) and there is 1 of the coma respondent (6,7%), while in group control the most level of consciousness is 10 respondents (66,7%), so samnolen 2 respondents (13,3%), letergis by 1 respondent (6,7%) and there 1 of the come respondent (6,7%).

The average degree of decubitus respondent on back massage before intervention was 4,73 with deviation standard 0,45. And the measurement after intervention obtained that the average is 5,93 with deviation standard is 0,25. It shown that the values of mean in difference between the first and the second measurement is 1,2 with deviation standard is 0,41 the

result of statistical test is 0,000, it can be concluded that there is a significant difference between before and after the back massage in group intervention. The average degree of decubitus respondents on back massage before intervention in group control is 5,8 with deviation standard 0,4. In measurement after the intervention there obtained is 5,6 with deviation standard is 0,6. It shown the values of mean on difference between first and the second measurement is 0,2 with deviation standard is 0,4, the result of statistical test is 0,82 it can be concluded there is no a significant difference between the massage in before and after intervention in the group control.

#### B. BIVARIATE ANALYSIS

The average of a values difference in the degree of decubitus in group intervention before and after back massage is 1,2 with deviation standard 0,41. The result of statistical test is  $p=0,000$  ( $\alpha=0,05$ ) while the average difference's values before and after intervention in group control is 0,2 with deviation standard 0,4. The result of statistical test is  $p=0,82$  ( $\alpha=0,05$ ) it can be concluded there is a significant effect of back massage on the prevention of decubitus on patient with bed rest at the Meuraxa hospital and Panti Werda Banda Aceh.

#### THE DISCUSSION

This discussion will explain and show about the topic which includes the interpretation and discussion about the result of research as it has been described in the research, the limitation of the research associated with the research design and characteristic of sample which used on it, and the discussion about implication of this research for health care and further research development.

The average of respondent's decubitus degree on back massage before intervention is 4,73 with deviation standard 0,45. In measurement after the intervention obtained an average 5,93 with deviation standard 0,25, it is shown the difference of values mean between first and second measurement is 1,2 with deviation standard 0,41, the result of statistical test obtained that a values is 0,000 it can be concluded is there a significant difference between before and after back massage done in group intervention. The average of respondent's decubitus degree on back massage before intervention in group control 5,8 with deviation standard 5,4. The measurement after

intervention there obtained the average 5,6 with deviation standard 0,63. It shown the mean values of the difference in measurement between the first and the second measurement 0,2 with deviation standard 0,4 the result of statistical test obtained a values 0,82 it can be concluded there is no a significant difference between after and before the intervention of massage in the group control, including to the concept, back massage is a one of the action that will be apply to give a comfort which the client can do it. This action can relieve the tension, relax the client and improve the circulation, because of it gives effect to the circulation, especially benefits to prevent the pressure sores (decubitus) on the bed rest clients. This intervention is also possible to do for nurses to check the client skin and see the redness areas which possible to decubitus. If the skin is redness, the massage can be the further damage [5].

The better result is the programme done sooner, because there is a further damage that cannot be cured. If the massage done sooner, it can prevent decubitus which can be a disruption for blood circulation even the infection is happens caused the injury and it can prevent the complication which caused the treatment of patient in hospital.

The result of this research as same as the theory after back massage is being done, it can prevent the decubitus in the group intervention, they are: the first average of decubitus degree is 4,73 but after back massage is done during 5 days, it can prevent the decubitus which evidenced by the increase of decubitus degree at fifth day is 5,93, it compare with the group control before intervention 5,8 and the second measurement is done after the intervention in fifth day and then obtained an average is 5,6, thus it can be concluded there is a significant difference of decubitus degree before the back massage and after intervention.

#### THE EFFECT OF BACK MASSAGE TO PREVENT DECUBITUS

The average of the different in strength values of muscle in the group intervention before and after back massage is 1,2 with deviation standard 0,41. The result of statistical test there obtained  $p=0,000$  ( $\alpha=0,05$ ) it can be concluded there is a significant effect in back massage on the prevention of decubitus in patient with bed rest, it is shown that the intervention

was done can be accepted with the patient at Meuraxa hospital and PantiWerda Banda Aceh. The nursing care which given to the patient with bed rest, they are : sleeping position control, mobilization, effective coughing exercises, back massage. Some exercises are efforts to help patient circulation in preventing infection and prevent disability and complications [2]. The implementation of the massage to the patient with bed rest by intense, focused and organized, it can prevent the damage of skin integrity, inadequate circulatory, after this exercise is done then the patient can be comfort, relax the muscles especially the back which pressure sores, so the patient goes home without damage to the depressed integrity of the Skin although patient with other complications of disease or level of compos mentis consciousness, if the skin is oppressed it can happens the decubitus. the result of statistical test shown the increased of the difference in decubitus degree at the group intervention before and after the back massage is 1,2, with deviation standard 0,41 , the result of statistical test obtained  $p=0,000$  ( $\alpha=0,05$ ), it can be concluded there is a significant effect of back massage for prevention of decubitus to patient with bed rest at Meuraxa hospital and PantiWerda Banda Aceh. This condition occurs because the intervention was given is consistent or associated with the main of theory and intense to do the exercise which organized and precise.

## V. CONCLUSION

### A. CONCLUSION

1. This research has identified the characteristic from 30 respondents, the most age of respondent is 25-54 years of age, the most sex in this research is the female group, the most risk of factor in this research is the surgery factor and osteoporosis and also the level of compos mentis consciousness.
2. The average of decubitus degree values in patient with different of bed rest, there is significant mean between the values of decubitus degree before the intervention is given with the values of decubitus degree after the intervention is done. Which is the mean there is a back massage can be able to prevent the decubitus.

### B. SUGGESTION

1. The suggestion for service institution  
The hospital or health service managers should have to realize the SOP (standard operational procedure) and SAP (standard of nursing care) on the bed rest patient. Panti werda managers should have the back massage training to Panti Werda administrators on staff.
2. For further research, especially the research in Universitas Syiah Kuala environment. The result of this research can be used to main data , and also the motivation to do the next research continuously in the surgery medical of nursing, which done well in educational institutions, as well as in community nursing services. and may increase the respondents, also adding the time and duration of the research periods.

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