



NURSING CARE FOR GRADE II DIABETIC ULCUS

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ABSTRACT

Background –Uncontrolled diabetes mellitus will cause various complications, one of which is diabetic ulcers. The incidence of diabetic ulcers in DM patients is still high, namely in 2020 it has reached 25% throughout their lives. Patients will be susceptible to severe infections if they do not understand how to properly care for wounds, so that patients with diabetic ulcers can experience problems in the form of impaired tissue integrity. The development of wound care with modern dressing methods has become a trend now, because this wound treatment uses the moist concept so that it speeds up the wound drying process.

Objectives –The case study aims to provide nursing care to patients with grade III diabetic ulcers with the main problem being impaired tissue integrity.

Method –This type of case study uses a qualitative research design with a case study approach. The sample in this study consisted of 2 diabetic ulcer patients with conventional wound care for 6 days.

Results –The results of case management for 6x8 hours showed that the wound condition had decreased in the BJWAT assessment score, but the wound healing process had not been resolved, namely patient 1 on the first day the BJWAT score was 38 then the sixth day it became 28 , while patient 2 on the first day was 39 then days sixth to 27. The wound healing process does take quite a long time, which can reach 12-20 weeks.

Conclusion– The conclusion of this scientific paper is that after treating the wound using 0.9% NaCl solution compressed with metronidazole and gentamicin ointment for 6x8 hours, the wound healing process has not been resolved, but the BJWAT wound assessment score has decreased.

Keywords:Diabetic Ulcers, Diabetes Mellitus, Impaired Tissue Integrity.

Introduction

Diabetes mellitus (DM) is a chronic disease that occurs either when the pancreas does not produce enough insulin or when the body cannot effectively use the insulin it produces. (WHO, 2021). *International Diabetes Federation* (IDF) in 2021 estimates that globally there will be 537 million people aged 20-79 years suffering from DM and more than 6.7 million people will die. Indonesia is the country with the fifth largest number of DM sufferers in the world with 19.5 million people (IDF Diabetes Atlas, 2021). DM disease in Central Java Province is 618,546 people (Provincial Health Service, 2021). The incidence of DM at Dr. Gondo Suwarno in 2017 numbered 377 people with 12 patients leaving dead, while in 2018 there were 314 people with 17 patients leaving dead (Hanan, 2020).

Uncontrolled DM will cause various complications, one of which is the complication of diabetic ulcers. Diabetic ulcers are wounds that occur in diabetic patients which involve disorders of the peripheral and autonomic nerves (Suryadi, 2004 in Wijaya & Putri, 2013).

PERKENI in 2015 stated that the prevalence of ulcers Diabetes in Indonesia is around 15% with a risk of amputation of 30% and a mortality rate of 32% and in Indonesia, diabetic ulcer disease is 80% of the biggest cause of hospitalization (PERKENI, 2015).

Patients with diabetic ulcers will experience open wounds on the surface of the skin and will experience extensive tissue death accompanied by invasive saprophytic germs which can cause diabetic ulcers to smell.

Diabetic ulcer patients are susceptible to serious infections so that diabetic ulcer patients can experience damage to tissue integrity. (Sugireng & Rosdarni, 2020).

The wound care method currently being developed is the modern method of dressing. The modern dressing method is a wound care technique that creates moist conditions in the wound so that it can help the process of epithelialization and wound healing (Schultz, D, et al, 2006 quoted in Colin &

Listiana, 2022).

Based on the still high number of cases of type II DM with ulcer complications diabetes and management damage integrit network can minimize damage to tissue integrity in diabetic ulcer patients, so the author is interested in providing nursing care entitled Nursing Care for Tissue Integrity Disorders: Ulcers Grade III Diabetes in Type II Diabetes Mellitus Patients at Dr. Regional General Hospital. Gondo Suwarno Ungaran.

Methods

This research uses a qualitative research design with a case study approach which aims to obtain an in-depth and comprehensive picture of a case study of tissue integrity disorders: grade III diabetic ulcers in type II DM patients with a sample size of 2 patients. The research instruments used were nursing care format, BJWAT format, wound care SOP, glucometer, stationery, digital camera, cotton swab, paper ruler

Results and Discussion

Assessment of patient 1 named Mrs S and patient 2 named Mr. S has similarities in complaints and wounds on the left leg that leads to on network integrity disruption issues. Mrs. S and Mr. S's main complaint was found to be a wound that did not heal and felt pain in the left leg with a BJWAT score of 38 and 39. The factor causing the injury in patient 1 was a spark, while in the patient it was due to pressure on a bony prominence. The cause of injury due to mechanical factors can be due to pressure on bone protrusions, pressure, frictional forces, trauma from blunt objects, sharp objects, firearms and explosives. Thus the cause of injury to the patient 1 and 2 according to theory, namely due to mechanical factors.

The assessment results showed that both clients had wounds on their left legs that were not

healing. Based on theory (Veranita, Wahyuni, Hikayati, 2016) states that the level of glucose in the blood influences the wound healing process. The higher the glucose level in the blood, the lower the ability of the blood vessels to contract and relax, resulting in poor tissue perfusion in the distal limbs.

The assessment of the cases of these two patients is classified as grade 3 diabetic ulcers. Based on theory (Wagner in Perkeni, 2021) there is grade 0 up to grade 5. Grade 3 has the characteristics of an ulcer with osteomyelitis or abscess. Withm Thus, based on the assessment of the wounds in both patients, according to the theory, they were classified as grade III diabetic ulcers, namely widespread ulcers accompanied by abscesses. Diagnosis nursing

The main problem is disruption of tissue integrity related to mechanical factors, as evidenced by the signs that appear, namely damage to the layers of skin and tissue and accompanied by pain in the wound area. Nursing care action plan that has been formulated for both patients to overcome patient nursing problems that focuses on wound care. Nursing care was carried out for 6x8 hours, with the first action carried out on both patients, namely monitoring blood sugar levels at any time. The aim of monitoring blood sugar levels is to identify high or low blood sugar levels. According to WHO, someone aged 30 years and over will experience an increase in blood sugar levels both fasting and eating tolerance, resulting in impaired insulin secretion and resistance in cells which can affect the effectiveness of protein and other substances in the healing process of diabetic foot wounds (ADA, 2014).

The second nursing action is to assess the wound with BJWAT. Based on theory (Kalifah, 2020) states that monitoring wound characteristics is an action as observation or observation of the wound healing process.

The next action is wound care. Wound care that is currently developing is using the modern wound dressing

method, where wound care uses a moist concept, so that it can speed up the wound healing process. However, at Dr. Gondo Suwarno Ungaran still uses conventional wound care methods, so the author in carrying out nursing procedures with wound care still uses conventional methods in accordance with hospital policy. The wound treatment I use is 0.9% NaCl liquid compressed with Metronidazole and given gentamicin ointment.

The final nursing action was to provide pharmacological therapy in the form of the drug Novorapid to the patient in 5 units and 4 units. The theory according to (Decroli, 2019) states that type II DM has two problems related to insulin, namely insulin resistance and impaired insulin secretion. Insulin cannot work optimally in muscle, fat and liver cells, forcing the pancreas to compress to produce more insulin, therefore in patients Type II DM requires additional insulin assistance.

The results of the assessment and nursing actions given to the two patients showed that the results of the nursing evaluation were a decrease in the GDS of the two patients, namely 151 mg/dL and 144 mg/dL. The wound assessment scores with BJWAT in both patients were 28 and 27. The results of the BJWAT wound assessment scores in both patients showed that they were at the wound regeneration stage.

Analysis of the two patients regarding the nursing problems that occurred, namely disruption of tissue integrity related to mechanical factors that had not been resolved in accordance with the goals and criteria for the results of the nursing plan that had been determined. This can be influenced by several factors that is nutritional imbalance or non-compliance diet Andblood sugar instability, this is in line with the theory put forward by (Rina, 2015) that the factors that play a role in wound healing are

nutritional management and controlling blood sugar levels.\

Conclusion

Based on the results and discussion that have been reviewed, the following conclusions can be drawn up:

1.The assessment of both patients showed diabetic ulcers which did not heal and the wounds in both patients were classified as grade III diabetic ulcers. Patient 1 complained of an injury to his left leg since 23 days ago due to a fire spark, while patient 2 complained of an injury to his left leg since + 3 months ago.

2.The nursing diagnosis that emerged in both atients was impaired tissue integrity related to mechanical factors which were characterized by damage to the skin layer to the tissue and accompanied by pain in the wound are

3.The nursing planning that will be carried out is wound care. The nursing actions carried out on both patients for 6x8 hours were monitoring blood sugar levels at any time, observing the wound using BJWAT, carrying out wound care and changing the wound dressing using clean principles once a day using 0.9% NaCl liquid with Metronidazole compressed and given gentamicin ointment., collaborative surgical debridement and collaborative administration of novorapid and antibiotics.

4. The evaluation results obtained were that the condition of the wounds in both patients experienced a decrease in BJWAT wound assessment scores and blood sugar levels whenimproves, but the condition of the wound shows that the healing process has not been completed in accordance with the goals and criteria for the results of the established nursing plan.

Suggestions

Recommended to both respondents Formore Pay attention to the condition of diabetic ulcer wounds by maintaining a healthy diet such as (low sugar, consuming lots of fruit and vegetables) so as not to experience hyperglycemia so that diabetic ulcers can heal quickly and wounds do not

become gangrene. Nurses and nursing students are advised to strive to improve the wound healing process in diabetic ulcer patients by using the BJWAT wound assessment format. Use of BJWAT wound assessment format makes it easier for nurses to carry out nursing care, monitor wound conditions and monitor the level of wound healing in diabetic ulcer patients. For hospitals, it is hoped that in this case study nursing care will be able to provide health care services and improve the quality of service in managing patients with tissue integrity disorders in type II DM patients with diabetic ulcers optimally. strives to improve the healing process of diabetic ulcer wounds.

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