

Medical Surgical Nursing Care For Mr. I With Integumentary System Disorders With A Diagnosis Of Diabetic Ulcersat Vita Insani Hospital Pematangsiantar

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Abstract

Diabetic ulcers are open wounds on the skin surface due to macroangiopathic complications, resulting in vascular insufficiency and neuropathy. According to WHO 2023, diabetic foot ulcers affect 18.6 million people worldwide. This study aims to implement medical-surgical nursing care for Mr. i with integumentary system disorders due to diabetic ulcers at Vita Insani Hospital, Pematangsiantar. This descriptive study used a case study approach on one respondent. Nursing care was provided for 3 days of treatment (April 5–7, 2026). Data collection used the KMB assessment format, informed consent, nursing kit, and standard SOPs. After 3x24 hours of nursing care, three primary nursing diagnoses were established: acute pain, impaired skin integrity, and impaired comfort. The final evaluation results showed significant improvement: the patient's pain level decreased drastically from a scale of 8 to a scale of 2, the pus seepage from the ulcer disappeared, the wound measured 5 cm long, 4.5 cm wide, and 0.5 cm deep, and the tingling and numbness in the extremities completely resolved. Implementing nursing care for patients with diabetic ulcers requires a comprehensive approach, including sterile wound care and effective non-pharmacological pain management. Nursing staff are expected to consistently integrate modern dressing principles and non-pharmacological techniques. Patients and their families are expected to adhere to a low-sugar, high-protein diet, regularly consume insulin therapy, and undergo regular check-ups at a healthcare facility.

Keywords: Medical-Surgical Nursing Care, Integumentary System Disorder, Diabetic Ulcer.



INTRODUCTION

Diabetic ulcers are open wounds on the skin surface caused by macroangiopathic complications, leading to vascular insufficiency and neuropathy. Furthermore, the wounds are often undetectable and can develop into infections caused by aerobic and anaerobic bacteria (Nurarif & Kusuma, 2024). These ulcers, also called diabetic neuropathy ulcers, can occur in individuals with diabetes mellitus, partly due to impaired circulation. Individuals with diabetes often struggle to heal, and these wounds can be difficult to treat. Medical record data at Vita Insani Hospital Pematang Siantar, the number of patients with diabetic ulcers during the observation period was a total of 130 cases. In 2023, there were 37 cases recorded, then in 2024 there were 50 cases recorded, but in 2025 there was a decrease with a number of 42 cases. In the last 3 months of 2025, the number of diabetic ulcer cases was recorded at 1 case, with the distribution of cases as follows: in October there were no cases (0 cases), in November there was 1 case found and in December there were no cases (0 cases). The initial survey conducted by researchers through interviews with nurses in one of the internal medicine inpatient rooms, found related to Diabetic Ulcer Patients with a middle age range of 45-80 years with an average male gender, Nursing actions carried out by nurses are usually wound care, controlling blood sugar levels, controlling infections. In general, they are still unable to apply nursing care actions independently, which is due to the condition of the patient itself. Based on the background description above and the initial survey conducted by the researcher, the researcher is interested in taking the title "Medical Surgical Nursing Care for Patients with Integumentary System Disorders with a Diagnosis of Diabetic Ulcers at Vita Insani Hospital, Pematangsiantar".

METHOD

Qualitative research is a systematic approach to exploring and understanding social and cultural phenomena in depth. Unlike quantitative research, which focuses on measuring and analyzing statistical data, qualitative research focuses on understanding the meaning behind the phenomena being studied (Polit & Beck, 2022). This study also used a case study design. A case study is a qualitative research design used to investigate phenomena in depth in a real-life context, focusing on one or more cases considered representative or meaningful (Ramadan et al., 2024). This study aims to describe how medical-surgical nursing care is provided to patients with integumentary system disorders due to diabetic ulcers at Vita Insani Hospital, Pematangsiantar. The research location was conducted in the Orchid Room of Vita Insani Hospital, Pematangsiantar. This research was conducted on April 5 – April 7, 2026. A research informant is a specific person or party outside the researcher who possesses expertise in the



research topic or problem.

RESULTS

This case study research was conducted at Vita Insani Hospital Pematangsiantar located at Jl. Merdeka No. 329, Pahlawan, East Siantar District, Pematang Siantar City, North Sumatra 21132. Vita Insani Hospital has been fully accredited, the highest accreditation pass rate given by the Hospital Accreditation Commission (KARS). Its scope includes a 24-hour Emergency Room (IGD), specialist polyclinics, inpatient care, and medical support facilities such as ICU, PICU, laboratory and pharmacy (Potts & Mandleco, 2007).

This case study was conducted over 3 days of treatment, starting from assessment, diagnosis, intervention, implementation, and evaluation of clients with diabetic ulcers from April 5 to April 7, 2026 with the treatment location in the Anggrek room.

Assessment

Table 1. Client identity

Client Identity	Client
Name	Mr. I
Gender	Man
Age	40 Years
Marital Status	Divorced
Religion	Islam
Education	High School
Work	Self-employed
Address	New Village
Date of Admission to Hospital/Time	April 4, 2026 / 11:36 PM WIB
Registration No.	443709
Room	Orchid
Blood Goal	-
Review Date/ Time	April 5, 2026 / 1:45 PM WIB
Medical Diagnosis	Diabetic Ulcer

Past Medical History

Table 2. Past Medical History

Diseases that have been experienced	The client has had type II diabetes for 1 year.
Treatment and actions that have been taken	Clients are given treatment only when they are hospitalized
Ever been treated	The client was previously treated for high blood sugar.
Length of treatment	The client was treated for 3 days
Allergies	No food or drug allergies
Immunization	The client said he didn't remember.

Supporting Examination Results

Hematology examination results on April 4, 2026

Table 3. Supporting Examination

Hematology Examination	Results	Note	Normal Values	Unit
Routine hematology				
Hemoglobin	10.8	↓	12-14 (w), 12-16 (p)	G/dl
Leukocytes	17100	↑	4,500-10,000	Mm3
Erythrocyte	4.00		3.80-5.80	Jt/mm3
Hematoric	32.6		35.0-50.0	Vol%
Platelets	198000		150,000-390,000	Mm3
PCT	0.127		0.100-0.500	%
MCV	81	↓	82.0-97	Fl
MCH	27.0		26.5-33.5	Pg
MCHC	33.2		31.5-37.0	g/dl
RDW	12.3		10.5-17.7	%
MPV	6.4		4.3-11.0	Fl

PDW	15.9		10.0-18.0	%
Esonophil	1		1-4	%
Basophils	0		0-1	%
Neutrophils	90	↑	40-80	%
Lymphocytes	2	↓	20-40	%
Monocytes	7		4-8	%
Electrolyte				
Sodium	112	↓	135-145	mmol/dl
Potassium	5.2		3.5-5.5	mmol/dl
Chloride	72	↓	96-106	mmol/dl
Blood sugar check				
Inspection	Results		Normal values	Unit
Random blood sugar	496	↑	80-160	Mg/dl

Therapy Management

Table 4. Therapy management

No.	Drug Name	Dose	Indication	Side effects
1.	0.9% NaCl infusion	20 tts / i	Meet the body's fluid and electrolyte needs	If excessive fluid consumption can cause edema
2.	Omeprazole	40 mg / 12 hours	Reduces stomach acid production and treats gastritis	May cause nausea, headache, and diarrhea
3.	Keterolac	30 mg / 8 hours	Reduces moderate to severe pain	Can cause stomach pain, nausea, and dizziness
4.	Ampicillin	1500 mg/ 8 hours	Treating infections caused by bacteria	May cause allergies, skin rashes, and diarrhea
5.	insulin rapid	3x16 mg	Lowers blood sugar levels quickly	Can cause hypoglycemia, weakness, and sweating

Data analysis

Table 5. Data Analysis

No.	Data
1.	DS: 1. The client complained of pain in the right leg. 2. The pain felt like being stabbed and throbbing. 3. The client said he felt numbness and tingling in his right leg. 4. Pain arises/increases when the leg is moved. 5. The pain increases when the officer performs wound care procedures. DO: 1. The client appeared to be wincing in pain. 2. Pain appears to interfere with the client's activities 3. Pain scale 8 4. BP 90/50 mmHg 5. Pulse: 71 x/minute. 6. Temperature 37 °C 7. Breathing 20x/minute
2.	DS: 1. The client said there was a reddish wound on his right leg which he had experienced approximately 2 weeks before entering the hospital. 2. The client complained that his right leg could not be moved due to injury. 3. The client complained of experiencing tingling and numbness in his lower extremities. DO:

	1. The wound is covered with a bandage, there is visible seepage of pus fluid on the bandage around the knee, and there is a bandage around the ankle.
	2. Skin warmth is increased considerably in the wound area.
	3. The client's skin looks dry
	4. There is edema in the right leg

Nursing Interventions

Table 5. Nursing Interventions

No .	Nursing Diagnosis	Output/Result criteria	Intervention
1.	Acute pain related to physiological injury agents is characterized by complaints of pain and grimacing. (D.0077)	After carrying out nursing actions for 3x24 hours, it is hoped that the pain will decrease with the following outcome criteria: 1. Complaints of pain decreased 2. Pulse rate improves Blood pressure improves 3. Able to use non-pharmacological techniques (L. 08066)	Pain Management (I.08238) Observation: 1. Identify the location, characteristics, duration, frequency, quality, intensity of pain 2. Identification of pain scale Identification of non-verbal pain responses Therapeutic: 1. Provide non-pharmacological techniques to reduce pain 2. Consider the type and source of pain when selecting a pain relief strategy. Education: 1. Explain pain relief strategies 2. Teach non-pharmacological techniques to reduce pain

			Collaboration : 1. Collaboration in providing analgesics
2.	Impaired skin integrity related to tissue necrosis is characterized by damage to the skin layer, redness and bleeding (D.0129)	After nursing actions for 3x24 hours, it is expected that skin integrity will increase with the following outcome criteria: 1. Decreased skin layer damage 2. Decreased bleeding 3. No pus 4. Network growth increases (L.14125)	Wound Care (I.14564) Observation 1. Monitor wound characteristics (eg: drainage, color, size, odor). Monitor signs of infection. 2. Monitor blood sugar results at any time Therapeutic 1. remove the bandage and plaster slowly 3. Clean with NACL liquid or non-toxic cleaner, as needed. 4. Clean necrotic tissue 5. Apply appropriate ointment to the skin/lesion, if necessary. 6. Apply a dressing according to the type of wound 7. Maintain sterile technique when treating wounds. 8. Change the dressing according to the amount of exudate and drainage. Education 1. Describe the signs and symptoms of infection 2. Recommend consuming foods high in potassium and protein 3. Teach self-care wound care procedures

			Collaboration 1. Collaboration in administering antibiotics
3.	Disturbance of Comfort related to the inflammatory process of wounds is characterized by complaints of discomfort and restlessness. (D.0074)	After nursing actions are carried out for 3x24 hours, it is hoped that the comfort status will increase with the following outcome criteria: 1. Complaints of discomfort decreased 2. Anxiety decreased. (L.08064)	Environmental Management (I.14513) Observation: 1. Identify factors causing discomfort Check whether there are physical factors (such as sleeping in the wrong position for too long, wrinkled sheets, or full diapers) that are making the client feel uncomfortable. 2. Monitor for uncomfortable symptoms : Monitor the client's response such as complaints of soreness, tingling, numbness, or non-verbal signs such as restlessness and difficulty sleeping. Therapeutic: 1. Provide a safe and comfortable environment: Make the bed regularly, ensure the linen/sheets are clean, dry, and free of wrinkles. 2. Control of disturbing environmental factors: temperature, lighting and noise Education: 1. Explain the objectives of management Environmental comfort: Providing an understanding to the client and



			family why the room must be quiet and sleeping positions must be changed periodically. 2. Teach how to set a comfortable position : 3. Teach the family to limit environmental stimulation: Educate the family to limit visits during rest hours so that the client can sleep soundly. Collaboration: 1. Collaboration in medical environment management: Coordinating with the medical or support team regarding the arrangement of room facilities.
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CONCLUSION

After medical surgical nursing care was carried out on patients with diabetic ulcers for 3 days starting from April 5–7, 2026 at Vita Insani Hospital Pematangsiantar, researchers conducted nursing care on patients with diabetic ulcers in the orchid room of Vita Insani Hospital Pematangsiantar for 3 days, three nursing diagnoses were obtained, namely acute pain, impaired skin integrity, and impaired sense of comfort. In the diagnosis of acute pain, pain management interventions were carried out through pain assessment, monitoring of vital signs, deep breathing relaxation techniques, education, and collaboration of Ketorolac analgesic therapy.

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