GENIUS JOURNAL
general nursing science journal
e-ISSN: 2723-7729
Vol. 04 No. 01 PP. 265-273 E-ISSN 2723-7729 Prefix DOI: 10.56359/gj

Wound Treatment with Absorbent Dressing Technique for Post-operative Submandibular Abscess Patients

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Submitted: 5 June 2022, Revised: 30 June 2022, Accepted: 6 June 2023, Published: 30 June 2023
DOI: doi.org/10.56359/gj.v4i1.108

ABSTRACT

Objective: To present care for wound care interventions with absorbent dressing techniques as an effort to prevent signs of infection and complications in postoperative submandibular abscess patients.
Methods: The method used is descriptive with a case study approach using nursing care that refers to the IDHS and SIKI books. The subject of this study was 1 patient with a nursing diagnosis of skin integrity damage in postoperative submandibular abscess patients who were treated in the Orchid Room of Banjar City Hospital. With data collection techniques include interviews, observation, physical examination and study documentation
Results: From nursing care in postoperative submandibular abscess patients, the symptoms that emerged during the assessment were an open wound on the lower right cheek. The nursing problem that arises is damage to skin integrity related to surgical wounds which refers to the IDHS book. Interventions carried out to prevent signs of infection and complications are wound care with absorbent dressing techniques. During the intervention process, the action went smoothly until the evaluation. There is a change in the surgical wound improving, does not cause signs of infection and complications. So that the intervention has a positive impact on wound healing and has improved
Conclusion: After the intervention of wound care with absorbent dressing technique, the surgical wound improved, did not cause signs of infection and complications, while the subjective data from the anamnesis, the client said the surgical wound had improved from the previous day.

Keywords: absorbent dressing, submandibular abscess, wound treatment

Introduction

Submandibular gland abscess is an inflammation associated with the formation of pus in the tissue due to infection (Dewi & Sucipta, 2017). Another opinion states that a submandibular abscess is the formation of an abscess in a potential space in the submandibular region accompanied by sore throat, fever, and limited mouth opening movements (Dewi, 2019). Usually the origin of infection in the submandibular abscess space according to the infectious process is based on the teeth, floor of the mouth, pharynx, and submandibular lymph nodes. These conditions include deep cervical infection (deep neck infection) (Hesly et al., 2014).

World Health Organization (WHO) infectious diseases have a relatively large contribution to the death toll of 25 million deaths worldwide in 2012, a third of which were caused by infectious diseases (Rahmawati, 2019). According to the Association of Indonesian Dentists, in 2014 approximately 70% of Indonesia's population experienced conflict over dental and oral health (Noviyanti, 2019)

Based on data from the Basic Health Research (Riskesdas) in 2018, the prevalence of oral abscesses in West Java was around 15.4%. Dental infection is the biggest cause of Ludovici angina at 52.2% followed by infection with submandinal abscess 48.3%, and parapharyngeal abscess (Skripsa et al., 2021). The prevalence of the age range is 1 to 81 years, 78% for men and 22% for women. Peri-pharyngeal infection was the most common, followed by parapharyngeal, submandibular, sublingual and submaxillary glands in 8 cases, and post-pharyngeal infection in 1 case. There were 185 cases of deep cervical infection. Submandibular gland abscess (15.7%) was the second most common case after parapharyngeal abscess (38.4%), followed by Ludwig's angina (12.4%), parotid gland (7%) and posterior pharyngeal wall (5.9%) . Location of abscess based on space potential 29%. Submandibular abscess 35%, parapharynx 20%, musculoskeletal 13%, peritonsil 9%, sublingual 7%, parotid gland 3%, infrahyoid muscle 26%, posterior pharynx 13%, carotid gland 11% (Hesly et al., 2014).

Submandibular gland abscess ranks first among all deep cervical abscesses where this abscess is inflammation accompanied by the formation of pus in the submandibular region, 70-80% of problems caused by dental infections or lack of dental and oral hygiene are the most problems, then caused by siladentis, lymphadentis , verbal wall laceration or mandibular fracture (Rahmawati, 2019). Submandibular abscess space is the most common part of deep throat infection. The usual signs and symptoms are fever and neck pain accompanied by swelling of the lower jaw and/or tongue that can fluctuate and often occurs with trimus (Lizar et al., 2017).

One of the medical treatment for submandibular abscess is using an incision method. Incision is indicated when drainage through the root canal is not possible. According to this incision, nursing cases such as pain and damage to skin integrity can interfere with the fulfillment of basic human needs, and other disorders such as expansion of infection if not addressed. So being an executor of nursing care plays a crucial role in efforts to improve the quality of meeting basic human needs in terms of overcoming these cases using pharmacological and non-pharmacological therapies (Rahmawati, 2019).

Administration of high-dose antibiotics against aerobic and non-aerobic bacteria must be administered parenterally. Abscess drainage can be performed under local anesthesia for superficial and localized abscesses, or with exploratory anesthesia for deep and extensive abscesses (Sander, 2012). One of the non-pharmacological methods is wound care with absorbent dressing techniques. Wound care is the act of treating wounds using efforts to prevent infection, kill or damage the growth of germs/bacteria on the skin and other body tissues. Wound care using the latest method is a method of wound healing by paying attention to wound moisture using occlusion and closure techniques (moist wound healing) (Mustamu et al., 2020).

Absorbent dressing is a dressing designed to absorb wound exudate, because the principle of wound care is to create moist conditions rather than wet conditions. The traditional absorbent dressing that is still used today is gauze, while the newest absorbent dressings include hydrocolloid and sodium alginate. Users of newer absorbent dressings such as sodium alginate can relieve discomfort by absorbing exudate and forming a gel that prevents it from adhering to the skin epithelium (Kartika et al., 2015).

According to the healing process, a moist wound environment is a key factor for debridement and is obtained using occlusive or semi-occlusive absorbent dressings. Based on wound type and healing period, non-aligned absorbent dressings are available for effective wound management (Ritonga et al., 2021). Based on the explanation above, the writer is interested in conducting a case study of wound care using absorbent dressing technique on Mr. I with a postoperative medical diagnosis of submandibular abscess in class 3P5, Orchid Room, Banjar City Hospital.

Objective

This study aims to present care for wound care interventions with absorbent dressing techniques as an effort to prevent signs of infection and complications in postoperative submandibular abscess patients.

Method

This case study uses a nursing care approach which includes assessment, determination of nursing diagnoses, nursing plans, nursing implementation and nursing evaluations. The study was conducted to collect data and information sourced from the patient, the patient's family, and the patient's status sheet by taking anamnesis and observing. Nursing diagnoses are sourced from the IDHS based on the analysis of existing data, while the nursing plan is sourced from the SIKI-SLKI book. Implementation and evaluation of nursing is documented with the SOAPIER model. Provision of wound care therapy with absorbent dressing techniques in postoperative submandibular abscess patients.

This study was conducted on postoperative submandibular abscess patients at the Banjar City Hospital, Class 3P5 Anggrek Room for 4 days from 25 to 30 May 2022. Before taking action the author explained in advance about the interventions carried out. At the time after being given an explanation, the client is willing to give verbal consent. Before the intervention was also given, the authors conducted a comprehensive assessment of the client to determine

whether intervention was necessary or not. And for the implementation is done for 15 minutes. By assessing/recording the size of the wound, applying compresses around the wound, maintaining wound closure as indicated, performing wound care with absorbent dressing techniques.

Results

Nursing Assesment

The results of the study obtained client data Mr. I am 31 years old, a Muslim man, married, an honorary, vocational education and resides in Cisaga RT/RW 01/05 Kec. Regency. Ciamis, with a postoperative medical diagnosis of submandibular abscess. All information was obtained from the client and family. The client's main complaint when an assessment was carried out on May 25, 2022 was that there was a lump accompanied by pain like a boil on the lower right cheek. The results of examination of vital signs include blood pressure: 120/80 mmHg, temperature: 36.5oC, respiration: 20 x/minute, pulse: 80 x/minute, general awareness composmentis with a total GCS: 15.

Table 1. Glasgow Coma Scale

GCS	Reaction	Score
E : Eye	Spontaneous eye opening	4
M : Motorik	Follow the order	6
V : Verbal	Good orientation	5
	Total	**15**

History of the present illness, the client was brought to the room due to a lump in the neck of the lower right cheek. Past medical history, the client has the same history, namely there is a lump in the eyebrow. The client does not have a family history of disease, namely hereditary or infectious diseases, and the client says his family is in good health. The results of laboratory tests performed on clients include the following.

Table 2. Laboratory Examination

Inspection	Results	Normal Value
Hemoglobin	16.3	14~17.5 gr/dl
Leukosit	6.7	4.4~11.3 ribu\mm3
Trombosit	231	150-450 ribu\mm3
Hematokrit	47	40~52%
Eritrosit	5.5	4.5~5.9 million/uL
MCV	85	80~96 fl
MCH	30	26~33 pg
MCHC	35	32~36%
Blood Type	AB	
PT	**11.3**	11.6-16.7 Second
INR	**0.73**	0.83-1.20 Second
Kreatinin	**1.0**	0.8-1.3 mg/dl
Ureum	19	15-50 mg/dl
Blood Glucose	117	<140 mg/dl

Nursing Diagnoses

Nursing diagnoses were taken based on the results of Data Analysis which were adjusted to the grouping of nursing diagnoses by the Indonesian National Nurses Association (PPNI) in the Indonesian Nursing Diagnosis Standards (IDHS) edition 1, revised III, 2017.

Table 3. Nursing Diagnoses

Data Analysis	Etiologi	Diagnoses
Subjective: The client says there is an open wound around the lower right cheek Objective: There is inflammation in the mouth, there are open sores	Infection ↓ Microorganisms spread ↓ Necrosis ↓ skin tissue damage	Impaired skin integrity related to surgical wound

Nursing Intervention, Implementation and Evaluation

After analyzing the data from the diagnosis, then the interventions given are taken in the Indonesian Nursing Intervention Standards book edition 1, print II in 2018.

Table 4. Nursing Interventions in Postoperative Submandibular Abscess Patients

No	Diagnose	Intervention	Note
1.	Impaired skin integrity related to surgical wound	Observation 1. Review/ note the size of the wound Terapeutik 1. Apply compresses around the wound 2. Maintain wound closure as indicated Edukasi 1. Teach septic and aseptic wound care procedures with absorbent dressing techniques	Conducted

Table 5. Nursing Evaluation

Times	Evaluation
Wednesday, 25 May 2022 08.30 WIB	Subjective : 1. The client said the postoperative wound was in the lower right cheek area Objective : 1. There is inflammation in the mouth

	2. There is an open wound in the lower right cheek area Assessment : Damage to skin integrity has not been resolved Planing : Continue intervention 1, 2, 3, 4 • Assess/record wound size • Maintain wound closure as indicated • Teach septic and aseptic wound care procedures with absorbent dressing techniques

Discussion

After carrying out the nursing care process to Mr. I was 31 years old with a postoperative submandibular abscess in the Orchid Room of the Banjar City Hospital from 25-30 May 2022. During the implementation of client and family care, they were very cooperative, making it easier to take action. The process consists of assessment, determining nursing diagnoses, interventions, implementation and evaluation.

The first stage is the assessment, which is the initial stage of the nursing care process, where the authors collect data by approaching the client and family accompanied by the aims and objectives to be carried out. These data will later be submitted for the enforcement of nursing diagnoses. Based on the results of the assessment on May 25, 2022 at 08.30, the client said that postoperative wound pain on the lower right cheek radiated to the head, pain was like being cut with a pain scale of 5 (0-10), pain was felt every activity, the wound area was 2 cm with The results of vital signs were blood pressure 120/80 mmHg, respiration 20 x/minute, pulse 80 x/minute, body temperature 36.5oC, SPO2 98%, in the integument there was an open wound on the lower right cheek.

The second stage is the determination of nursing diagnoses which are carried out after collecting assessment data on Mr. Based on the analysis of the data obtained, the diagnosis that arises is damage to skin integrity related to surgical wounds on the client, which is characterized by subjective data, namely the client says there is an open wound on the lower right cheek, while the objective data obtained is that there is inflammation in the mouth and there is an open wound.

According to the facts in the field and existing theories, the results obtained are related in terms of determining nursing diagnoses in patients with postoperative submandibular abscess. The facts in the field state that in patients with postoperative submandibular abscess, it can lead to a nursing diagnosis of damage to skin integrity due to damage to the skin (dermis and/or epidermis) or tissues (mucous membranes, coma, fascia, muscle, tendon, bone, cartilage, capsule). joints and/or ligaments). In line with a survey by (Dylan Trotsek, 2017) One of the skin integrity disorders that occurs in patients with submandibular abscess is the disruption of tissue incontinence around the incision area. With limitation of major characteristics: tissue damage/skin layer and limitation of minor characteristics: pain, bleeding, redness.

The third stage is nursing planning which is carried out after collecting data and establishing a diagnosis, then the writer plans the actions to be carried out. At this stage the authors develop an action plan tailored to the problems found and adapted to the capabilities, situations, circumstances and existing facilities. The interventions carried out in accordance with the Nursing Intervention Standards book (PPNI, 2016) are as follows:

Table 6. Nursing Intervention

Intervention	Rationale
Observation 1. Assess / record the size of the wound **Terapeutik** 1. Apply compresses around the wound 2. Maintain wound closure as indicated **Education** 1. Teach septic and aseptic wound care procedures with absorbent dressing techniques	1. Provides basic information about infection 2. Clean the wound area 3. Reduce skin infection/failure 4. Accelerate wound healing

And the author adds non-pharmacological focused actions that are not contained in the nursing intervention book but exist in several previous studies, namely teaching septic and aseptic wound care with absorbent dressing techniques.

From the diagnosis that appears and the symptoms that arise above are damage to the integrity of the skin characterized by damage to the tissue / skin layer on the client. The intervention is wound care with absorbent dressing technique. This intervention can prevent signs of infection and complications, so doing this technique has a positive impact on wound healing and improvement (Mustamu et al., 2020).

The fourth stage is the implementation where the author performs nursing care, which is carried out according to the plans that have been prepared previously. Not as expected, one of them in carrying out and assessing the progress record is not perfect for 24 hours. This is due to time constraints.

As for some of the actions carried out by the author after being planned in advance, including assessing/recording the size of the wound, applying compresses around the wound, maintaining wound closure as indicated, and the author adding a focus action, namely teaching septic and aseptic wound care with absorbent dressing techniques.

The fifth stage of evaluation is the final stage of the nursing process. The formative evaluation did not encounter any obstacles, but the authors' inability to fully monitor the client's condition hindered the overall evaluation.

In a formative evaluation conducted on May 25, 2022, the results have not been resolved because the client still says pain in the surgical wound in the lower right cheek. Meanwhile, the summative evaluation by monitoring the patient's progress notes which was carried out on 27-30 May 2022 showed quite good results. Wound care intervention with absorbent dressing technique in the case of Mr. I with postoperative submandibular abscess on the second day obtained a problematic diagnosis, namely: Damage to skin integrity related

to surgical wounds. The problem was resolved on the 4th day after the intervention, the patient said that after returning from the hospital, he always did wound care with absorbent dressing techniques to accelerate wound healing.

Wound care with absorbent dressing technique has proven to be effective in reducing pain and accelerating wound healing. It is proven by Mr. I who routinely performs wound care with absorbent dressing technique after 4 days of surgical wound improving, does not cause signs of infection and complications.

Conclusion

After the author carried out nursing care for Mr. I with Integumentary System Disorders: Post Surgery for Submandibular Abscess in the Orchid Room of the Banjar City Hospital on 25-30 May 2022, the authors concluded that the surgical wound improved from the previous day, did not cause signs of infection. and complications. In the implementation process, the client is also cooperative in doing whatever is recommended by the nurse.

Acknowledgement

The author would like to thank the Head of the Orchid Room at the Banjar City Hospital who has facilitated the implementation of postoperative submandibular abscess patients. And also the author would like to thank the patient Mr. I and my family who have agreed to become participants in this case study.

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