Optimization of wound care to prevent infection risk in a patient with a submandibular subcutaneous abscess at RSUD Wates

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Abstract

Background: A submandibular abscess is a collection of pus that accumulates in a localized area within tissue. The standard treatment involves surgical incision and drainage. In the case presented, the researchers identified a nursing problem related to the risk of infection. One of the primary interventions for patients' post-incision and drainage surgery is wound care, which plays a vital role in preventing infection and supporting healing process. Objective: The aim of this Final Scientific Work for Nurse Qualification (Karya Ilmiah Akhir Ners – KIAN) is to provide nursing care focused on managing the risk of infection caused by invasive procedures, through proper wound care. Method: This study employed observational case study with cross-sectional design, involving a patient at risk of infection, specifically with a medical diagnosis of a subcutaneous abscess in the left submandibular area. Intervention: The nursing care provided included wound care to prevent infection due to the invasive procedure, in collaboration with medication administration. Evaluation: After two days of observation and wound care, the patient reported reduced pain in the submandibular area. The wound showed signs of improvement: minimal dryness, no redness, clean and well-aligned stitches, and partial closure of the incision. The patient appeared relaxed, was able to sit up, eat small amounts, and chew slowly. As a result, the infection risk associated with the invasive procedure was resolved. Conclusion: Wound care can be an effective intervention when performed according to the standard operating procedure (SOP) for sterile wound care, and when the patient is committed to maintaining hygiene, particularly around the surgical area. These findings demonstrate that sterile wound care plays a significant role in reducing the risk of infection following invasive procedures.

Keywords: infection risk; submandibular abscess; wound care

1. Introduction

An abscess is a collection of pus located in a pocket that forms in tissue caused by an infection process by bacteria, parasites or other foreign objects (Ariobimo et al., 2023). A submandibular abscess is a collection of pus in a single area of tissue caused by a bacterial, parasitic, or other foreign body infection of the submandibular gland and lymph nodes. The yellowish-white pus comes from organisms infecting blood cells. The infection occurs when microorganisms enter the body.Submandibular infections usually originate in the first and second mandibular molars. The infection spreads from the submandibular region through the sublingual and submental regions. A submandibular abscess is characterized by pain and swelling from the cheek to the inner part of the neck where the infection has occurred. (Pokhrel, 2024)

A submandibular abscess can occur in any cavity or space within the body, including the submandibular, peritonsillar, parapharyngeal, retropharyngeal, submental, parotid, anterior visceral, carotid, and masseteric spaces. A submandibular abscess is an inflammation of the submandibular area accompanied by pus formation. Submandibular abscesses are a type of deep neck infection. The most common deep neck abscess is the submandibular abscess (42.3%), with an odontogenic prevalence of 34.21%. The most common odontogenic infection originates from the periapical area of teeth experiencing pulp necrosis (25%). Teeth experiencing pulp necrosis due to caries that extends to the pulp are the entry route for bacteria to enter the periapical tissue. The resulting infection can then spread in all directions and is more common in parts of the body with the lowest resistance. The infection can also spread through the cancellous bone to enter the cortical bone. Thin cortical bone provides a pathway for bacteria to enter the surrounding soft tissue. The spread of infection to other tissues depends on the source, for example, infections of the teeth, pharynx, tonsils, paranasal sinuses, and ears, or due to trauma. Infection of mandibular molars can spread buccally to the submandibular space.

Treatment for a submandibular abscess involves incision and drainage (surgery) at the lower border of the mandible, avoiding the facial artery and vein. This involves bacterial culture of the pus and antibiotic sensitivity testing. Antibiotic susceptibility testing aims to identify specific antimicrobial

agents for infection management. Wound care is a key component of post-incision and surgical management, helping prevent infection and promote healing. Patients undergoing surgery or invasive procedures are at increased risk of wound infection.(Aryani et al., 2022).

Risk for infection is a nursing diagnosis defined as an increased risk of infection by pathogenic organisms. One factor contributing to this increased risk is invasive procedures (IDHS).Precautions and protocols to prevent infection: Essentially, any surgery that "damages" the skin tissue, the body's natural barrier, can lead to surgical infections. Microbes can infect surgical wounds in several ways, including through physical contact, airborne contamination from surgical instruments, or through microbes already present in the patient's body but spreading to the surgical wound. This infection can lead to the production of pus, which, if excessive, can form an abscess, which can force the surgical wound open.(Irianto & Adityawardhana, 2021).Surgical wound infections are caused by bacterial contamination from the surgical site, which can occur in various ways, including: damage to the hollow viscus wall, normal bacterial flora on the skin and poor sterile surgical techniques which can cause exogenous contamination from the surgical team, equipment and the surrounding environment. (Sumarningsih et al., 2020)One of the main factors causing infection is impaired post-operative wound healing.

Many factors contribute to surgical site infections (SSIs). Wound infections can occur due to bacterial contamination at the surgical site, which can occur through: damage to the hollow viscus wall, normal skin flora, and substandard surgical techniques that can lead to exogenous contact with the surgical team, surgical instruments, and the surrounding environment. The severity of the infection can be influenced by the toxins produced by the microorganism and its ability to become resistant to phagocytes and intracellular damage. Pathogens that can cause SSIs are generally normal skin flora, namely gram-positive organisms, Staphylococcus aureus and Staphylococcus epidermidis. Risk factors for SSIs are divided into two: patient factors and procedural factors. Patient factors include the type of surgery, ASA (American Society of Anesthesiologists) score, age, nutritional status, obesity, immune status, hyperglycemia, hypothermia, hypoxia, anemia, smoking history, and bleeding. Surgical factors include the length of hospitalization before surgery and the duration of surgery.(Lestari et al., 2021).

Several factors can reduce infection, including education on pain reduction, balanced nutrition, good wound care methods, early identification of signs of infection, stress reduction, and increased self-esteem. Nurses play a crucial role in educating patients about primary preventive measures, aiming to foster patient independence and enable them to perform post-incision and drainage wound care, especially at home. In addition to education, nurses also play a crucial role in controlling the risk of infection through wound care.(Lestari et al., 2021).

Wound care involves cleaning, treating, and covering wounds using sterile techniques. The goal of wound care is to prevent the entry of germs and dirt into the wound. The goal of wound care itself is to prevent the spread of fluids and germs from the wound to the surrounding area and to treat the wound with prescribed medications. The most recent wound care approach is modern wound dressing. Modern wound dressing is a closed wound care method that focuses on maintaining moisture to promote wound healing (Hidayat & Choerunnisa, 2021). The main principle in wound care is infection control because infection can cause the wound healing process to be hampered, thus increasing morbidity and mortality rates.Wound care techniques are a factor influencing wound healing. Various wound care techniques are often discussed, one of which is wound dressing. The main principle in wound care is controlling infection because infection inhibits the wound healing process, causing increased morbidity and mortality rates, which lead to longer treatment days. Postoperative wound infections are a major problem in surgical practice, in addition to the presence of surgical wound infections impacting additional treatment time and costs. The latest wound care technique in nursing is using the principle of moist and closed, a moist environment in the wound that supports the wound healing process. Moist and closed wound care techniques, also known as "moistwoundhealing," are methods to maintain wound moisture by using moisture-retaining dressings so that wound healing and tissue growth can occur naturally. The emergence of the concept of "moistwoundhealing" became the basis for the emergence of modern wound dressings. It states that the moist method with closed dressings has clinical advantages in increasing the proliferation and migration of epithelial cells around a thin layer of water, reducing the risk of infection and the emergence of new tissue.

Improper post-operative wound care often hinders the wound healing process, including the use of NaCl gauze compresses as an effort to maintain moisture that cannot be maintained for longer, so the wound must be changed more frequently. This phenomenon will have an impact on the emergence of re-injury to the wound bed which will stimulate re-inflammation in the wound bed. The use of antiseptics, such as 1% iodine and H2O2 in conventional care can trigger damage to blood capillaries, this will affect the stress condition of the tissue that is regenerating (Ginting et al., 2023).

Based on the description above, the author is interested and motivated to write a scientific paper on "Implementation of Infection Prevention with Infection Risk Problems in Patients with Subcutaneous Abscess in the Left Submandibular Area with Wound Care in Menoreh Lor, Wates Regional Hospital". The study was conducted for 3 days on March 3-5, 2025 in the Menoreh Lor room, Wates Regional Hospital. During the practice, the author found a case of an 18-year-old patient with a subcutaneous abscess in the left submandibular area for the second time. Interviews conducted with the patient and the patient's family, the patient said that in the lower left jaw area there was a lump that had been oozing cloudy yellow fluid along with bloody pus since 3 months ago. Based on the background above, the author is interested in knowing more about nursing care for patients with subcutaneous abscess in the left submandibular area at Wates Regional Hospital in the Menoreh Lor ward.

2. Method

2.1. Research Design

This research is an observational case study with a cross-sectional approach design.

2.2. Research Subjects

The research subjects in this case study were patients at risk of infection, particularly with a medical diagnosis of subcutaneous abscess in the left submandibular area.

2.3. Data collection technique

2.3.1. Primary Data

Observations are conducted by directly observing respondents to assess their general condition, awareness, vital signs, and physical examination. The physical examination serves as baseline data for determining the next steps, including establishing a diagnosis, action plans, and evaluation (Butar et al., 2022). Physical examination includes inspection, which is an examination using the senses of sight, hearing, and smell. Palpation is an examination using the sense of touch; hands and fingers to determine the characteristics of tissue or organs such as temperature, elasticity, shape, size, moisture, and protrusions. Percussion is an examination that involves tapping the surface of the body to produce sounds that will help in determining the density, location and position of underlying structures. Auscultation is the act of listening to sounds produced by various organs and tissues of the body.

2.3.2. Secondary Data

Secondary sources are sources that do not directly provide data to data collectors, for example through other people or through documents (Sugiyono, 2022).

2.4. Data analysis

2.4.1. Data Reduction

Data reduction was carried out from the beginning of data collection by creating summaries, coding, exploring themes, creating clusters, writing memos, and so on, with the aim of eliminating irrelevant data/information. Data reduction consisted of the results of interviews with research subjects, namely patients with submandibular subcutaneous abscesses.

2.4.2. Data Presentation

The data presentation is in the form of narrative text in the form of notes from interviews with patients and families of patients with submandibular subcutaneous abscesses in the Menoreh Lor Ward, Wates Kulon Progo Regional Hospital.The results of observations and physical examinations are structured information that provides the possibility of drawing conclusions and verification.

2.4.3. Conclusion Drawing

Conclusions were drawn by identifying the characteristics of patients with submandibular subcutaneous abscesses. Therefore, the analysis activity represents an interaction between the three data analysis steps and is a cyclical process until the research is completed. In accordance with the research methodology, the author used descriptive data analysis techniques. Data analysis was conducted by systematically organizing interview guidelines, nursing care formats, and literature data. Verification was performed by reviewing data reduction and data presentation.

3. Results and Discussion

3.1. Results

3.1.1. Assessment

This study was conducted on February 3, 2025 in the Menoreh Lor ward of Wates Kulon Progo Regional General Hospital, and the results showed that Mrs. R, 18 years old, female, Muslim, Javanese, and Indonesian citizen, had a medical diagnosis of left submandibular subcutaneous abscess.

The patient's assessment results showed a lump on the skin of the lower left jaw accompanied by the discharge of cloudy yellow fluid, pus and blood since 3 months ago and the patient complained of fever, after being examined at Wates Regional Hospital the patient was diagnosed with a subcutaneous abscess in the left submandibular area and the doctor recommended immediate surgery. Based on the results of the assessment and data analysis, Mrs. R has a risk of infection for the lump that discharges pus and blood, therefore it is necessary to perform surgical removal of the abscess tissue.

Based on the results of the assessment and data analysis, Mrs. R had experienced the same thing related to a lump in the lower left jaw and had undergone surgery in 2023, and the patient's family said that after the surgery, wound care was carried out at the community health center, but the family said that the wound care was not optimal so that another lump appeared.On examination of vital signs, the results obtained were Blood Pressure 128/83 mmHg, Pulse rate 89 x/minute, Respiration 20 x/minute, Oxygen saturation 99%, Temperature 36.2°C, these values are within the normal range.

Based on the examination results, the patient is recommended for surgery. Treatment for a submandibular abscess involves incision and drainage at the lower border of the mandible, avoiding the facial artery and vein, and performing a bacterial culture of the pus and antibiotic concentration testing. Submandibular abscesses that have spread to other spaces must be opened and drained. Abscess drainage can be performed using aspiration or incision and exploration, depending on potential complications and the extent of the abscess. (Aryani et al., 2022).

3.1.2. Data analysis

The nursing diagnosis that emerged was the risk of postoperative infection due to the effects of invasive procedures, with data obtained showing a surgical wound dressing on the lower left jaw. The diagnosis taken was adjusted to the nursing diagnosis guidebook according to Nanda (2018) based on the definition, characteristic limitations, and etiology.

Based on the case of post-operative submandibular subcutaneous abscess, the author prioritizes the risk of infection as a diagnostic priority in accordance with the main complaint felt by the patient. The risk of infection due to the effect of invasive procedures is one of the problems for the emergence of infection so that wound care is needed for post-operative wounds, wound care is carried out every day. Wound care and dressing techniques aim to prevent cross-infection (germs entering through the wound) and accelerate the wound healing process. Wound care is a wound treatment that consists of cleaning the wound, covering, and bandaging the wound so that it can help the wound healing process.(Sandra et al., 2022).

3.1.3. Intervention

The intervention given to Mrs. R, diagnosed with a risk of infection due to the effects of invasive procedures, is wound care. Wound care is carried out to prevent infection and prevent the entry of germs and bacteria. Wound care uses two basic techniques that are often applied in wound care: sterile technique and clean technique. Sterile technique is a technique in which health workers use equipment and materials that have been sterilized so that no bacteria or virus particles stick to the surface. Clean technique is a technique in which health workers use equipment or materials that do not require careful

treatment such as treating sterile instruments. Simply use equipment that has been cleaned with alcohol without having to put it in an autoclave (a tool for sterilizing medical equipment) first.(Harun et al., 2024).

3.1.4. Implementation

Implementation given to Mrs. R in addition to wound care was the administration of cefazolin injections, ketorolac, ranitidine, and metronidazole drip. After wound care for 2 days post- surgery, the patient complained of pain, the post-surgery wound was still wet, and her cheek was still swollen. After surgery, the patient had no difficulty swallowing or speaking. Before performing wound care, other nursing actions included washing hands before and after contact with the patient or the patient's environment, and maintaining aseptic techniques in high-risk patients.

Implementation in the context of nursing refers to carrying out a care plan designed using nursing knowledge. It is an initiative step in an action plan aimed at achieving specific goals. Implementation begins after the action plan is developed and focuses on nursing orders to help the patient achieve the desired goals.(Zaidar et al., 2022).

3.1.5. Evaluation

After treatment was carried out on Mrs. R with the risk of post-invasive infection, the surgical wound on day 1 still looked wet, red, the stitches had closed, and continued with wound care on day 2 before the patient went home, the wound had improved, was slightly dry, there was no redness, the stitches had closed and the pain had decreased, then interventions were carried out related to wound care at home, such as providing education that the surgical wound should not be exposed to water first, and do not open the dressing if you have not had a check-up, if you want to clean the dressing area you can wash your hands first, and for the check-up to be carried out 3 days after the patient was declared home. The nursing problem has been resolved

3.2. Discussion

3.2.1. Assessment

A submandibular abscess is an inflammation accompanied by the formation of pus in the submandibular area. The submandibular space is further divided into the submental and submaxillary (lateral) spaces by the anterior digastric muscle. This condition is a type of deep neck infection. Infection in the submandibular space generally originates from the teeth, floor of the mouth, pharynx, or submandibular lymph nodes.The most common deep neck abscess is the submandibular abscess (42.3%), with a prevalence of odontogenic causes of 34.21%. The most common odontogenic infection originates in the periapical area of teeth experiencing pulp necrosis (25%). Teeth with pulp necrosis due to caries that extends to the pulp are the entry point for bacteria into the periapical tissue. The resulting infection can spread in all directions and is more common in areas of the body with the lowest resistance.(Aryani et al., 2022).

The results of the patient's assessment showed that there was a lump on the skin of the lower left jaw accompanied by the discharge of a cloudy yellow fluid, pus and blood since 3 months ago and the patient complained of fever, this was in line with(Litha et al., 2021)thatThe source of infection is generally in the submandibular space. The patient complained of swelling in the left cheek and lower left jaw. Furthermore, the complaint was accompanied by fever. The discharge of yellow, cloudy, and purulent fluid was also consistent with the study.(Aryani et al., 2022) Pus forms as a result of normal flora growing in the body. Infection causes cavities to form in the infected tissue due to the death and destruction of cells within the tissue. These cavities contain infected tissue and cells. White blood cells enter these cavities and phagocytose bacteria, a crucial component of the human body's defense mechanism. Phagocytosis is the process by which white blood cells ingest or devour bacteria, preventing or stopping their growth. White blood cells that successfully phagocytose bacteria die, forming pus that fills the cavities.

This research is also in line withZulfikar et al., 2022that age is a risk factor that can encourage the occurrence of odontogenic infections. According to data from medical record installation visits, odontogenic infections at Abdoel Wahab Sjahranie Regional General Hospital showed 16 cases of submandibular abscess (41.02%). This study is in line with research conducted by which stated that

odontogenic incidents were often found in the adolescent age group (12-25 years) as much as 22.72% and this study is also in line with Anggreni Setiawan & Putra, 2020 that sufferers of submandibular subcutaneous abscesses aged 11-20 years were 13.88% with the number of women 14 or 38.89%.

The primary goal of management in patients with submandibular abscesses is to prevent complications. Management of orofacial infections (including submandibular space infections) includes surgical intervention to drain localized pus and medical support for the patient. This can be performed either intraorally or extraorally, depending on the location of the infection. Aspiration of pus before incision allows for more accurate sampling, reducing contamination and helping protect against anaerobic bacteria. Fluctuating swelling indicates the presence of pus and is defined as fluid transmission using bidigital palpation. This is consistent with (Krisna Bayu et al., 2024) thatTreatment of this abscess often requires incision and drainage to remove the pus.

3.2.2. Data analysis

The nursing diagnosis that arises in submandibular abscesses that undergo incision and drainage is the risk of infection due to invasive procedures.Surgical wound infections are a major problem in nursing practice.One aspect of nursing care is preventing surgical wound infections. Nurses are the final link in the nursing care process. Infections can hinder wound healing, increasing both morbidity and mortality. Determining whether a surgical wound is infected or not uses the REEDA (Redness, Edema, Ecchymosis, Discharge, and Approximation) wound healing measurement tool.(Kartikasari & Apriningrum, 2020).During surgery there is tissue trauma, therefore there is a risk of microorganisms entering and causing infection.

According to the World Health Organization (WHO), Surgical Site Infections (SSIs) are a type of HAIs (Healthcare-associated infections) that often occur in developing countries with a combined incidence of 11.8 cases out of 100 surgical procedures. SSIs are infections in the incision area or organ-space that occur in patients after surgery. According to several studies, SSIs cause an increase in LOS (Length of Stay) in hospitals from 1.5 to 16.6 days. Current data shows that surgical site infections cause more than two million nosocomial infections in hospitalized patients in the United States. Meanwhile, the prevalence rate of SSIs in Indonesia is estimated at around 2.3-18.3% and is the most common nosocomial infection, accounting for 38% of HAIs.

Surgical site infections are caused by bacteria entering through incisions made during surgery. They threaten the lives of millions of patients each year and contribute to the spread of antibiotic resistance. This research is in line with(Bhayangkara & Depok, 2024)The study, entitled "The Relationship Between Knowledge and Nurses' Actions in Preventing Surgical Wound Infections," stated that there was a significant relationship with a 95% significance level. The study stated that 88% of nurses with good to adequate knowledge could prevent and reduce the risk of SSI (surgical wound infections).

3.2.3. Intervention

Interventions performed on Mrs. R's patient included infection prevention through wound care, limiting the number of visitors, washing hands before and after contact with the patient or the patient's environment, maintaining aseptic technique in high-risk patients, explaining the signs and symptoms of infection, teaching how to check the condition of wounds or post- operative wounds, and teaching to increase nutritional intake. This is in line with research.(Siswandi et al., 2020)about the relationship between nutritional status and the post- operative wound healing process.One factor that can influence the wound healing process is nutritional status. Wound assessment is based on a clinical examination of the patient and is assessed in the inflammatory and proliferative phases. In the inflammatory phase, redness, warmth around the wound, pain, and swelling occur. In the proliferative phase, the wound begins to close, tension decreases, edema decreases, redness decreases, the temperature around the wound returns to normal, pain decreases, and itching decreases.

Improving the nutritional status of surgical patients is crucial for accelerating the healing process of surgical wounds and underlying conditions. One contributing factor to this problem is that surgical patients in hospitals are vulnerable to malnutrition. Therefore, providing proper nutrition to hospitalized patients will improve clinical outcomes, leading to recovery.(Siswandi et al., 2020).

The Ministry of Health launched the Clean and Healthy Living Behavior (PHBS) program as a means of improving public health. The PHBS program includes 10 key activities implemented and

provided to the community, one of which is handwashing or maintaining hand hygiene. Hand hygiene is a way to improve personal hygiene. Hand hygiene is important as a way to reduce the incidence of nosocomial infections (NOIs). This is in line with research.(Sinanto & Djannah, 2020)Handwashing with soap, or hand hygiene, is highly effective in preventing infection. It has been proven that handwashing with soap can reduce the risk of infection. Implementing handwashing with soap requires good knowledge, attitudes, and behavior regarding handwashing with soap (CTPS) to avoid disease. Handwashing with soap is a pillar of community-based total sanitation, which includes the six steps of proper handwashing.

According to WHO, nosocomial infections can come from visitors, hospital staff, patients, or the hospital environment. Infection Prevention and Control (IPC) measures such as limiting the number of visitors, establishing visiting hours, and educating and promoting handwashing among patients' families can help prevent the transmission of infection from visitors, as well as implementing infection prevention and control plans for staff. Lack of attention to aseptic sterile techniques by nurses during surgery, lengthy nursing care, poor service standards, and overcrowding in the wards cared for by nurses can all contribute to the occurrence of nosocomial infections.(Sinanto & Djannah, 2020)

Nurses also play a role in reducing the incidence of SSI by performing wound care according to hospital SOPs. This is also in line with research.(Murwaningsih & Waluyo, 2021)thatThe acute wound care study conducted by researchers aims to prevent post-laparotomy complications and provide necessary educational information for patients and their families. The study findings indicate that the potential for post-surgical infections increases because patients do not receive clear and easily understood information. Each individual is unique, requiring a different approach to providing information and education. Nurses play a crucial role in exploring patient needs, particularly regarding information and education. This study provides a multidisciplinary approach and involves families in all care provided, allowing families to learn gradually and become capable of assisting and preparing for patient care after discharge.

3.2.4. Implementation

In the case study on Mrs. R, the author performed wound care for the post-operative incision drainage wound on the submandibular subcutaneous abscess, because wound care is very important for post-operative patients because it can reduce the risk of infection, this is in line with research.(Murwaningsih & Waluyo, 2021) Optimal wound care significantly supports the healing process. Studies show that postoperative wound care requires primary protection against microorganisms, considering the importance of selecting an antimicrobial dressing in the event of an abscess, and involving a multidisciplinary approach to wound care management. Wound care in cases involving the removal of the skin stapler involves first using a skin stapler remover. The skin stapler is used as a wound closure material. Primary wound closure occurs when each layer of tissue, including the dermis, subcutaneous layer, fascia, and muscle, is glued together and held in place by staples, sutures, or skin adhesive. The use of staples, sutures, or skin adhesive constitutes a foreign object. If the foreign object becomes infected or irritates the wound, healing will be hampered, requiring removal of the wound dressing.(Murwaningsih & Waluyo, 2021).

The occurrence of surgical wound infections is a serious problem, because this problem can affect clinical importance and more serious symptoms, such as increased morbidity and mortality rates of post-operative patients, increased length of hospital stay and increased costs in hospitals. Post-operative wound infections are one of the main problems in surgical practice in this case post-operative will inhibit the wound healing process so that it causes increased morbidity and mortality rates which cause long days of hospitalization and in the worst case, abscesses and even death.(Yanti et al., 2021).

One of the causes of SSI is the lack of attention to sterile techniques in wound care, this is in line with research which states that the standard operating procedure (SOP) for wound care with the incidence of post-submandibular abscess surgical wound infection with a p value of 0.000

<0.05.(Nursanty & Arofiati, 2020)This is in line with research(Yanti et al., 2021)that it is known that from 80 respondents, most of the respondents received wound care with sterile techniques, namely 73 respondents (91.25%), and those who were not sterile were 7 respondents (8.75%). The results of the analysis obtained data on the relationship between sterile wound care techniques and the incidence of surgical wound infections in postoperative patients, it is known that respondents who received sterile

wound care and their postoperative wounds were good were 73 respondents (91.25%), respondents who received sterile wound care and their postoperative wounds were less good were 0 respondents (0%) and respondents who received sterile wound care and their postoperative wounds were infected were 0 respondents (0%). Of the 3 respondents (0%) who received wound care using non-sterile techniques and their postoperative wounds were in good condition, while 3 respondents received wound care with non-sterile techniques and their postoperative wounds were less good were 3 respondents (0%) and respondents who received wound care with non-sterile techniques and their postoperative wounds were infected were 1 respondent (1.25%).Based on the research results, the majority of respondents at Mitra Husada Pringsewu Hospital received sterile wound care (91.25%), while 8.75% of patients did not receive sterile care. The research results showed a significant relationship between the use of sterile techniques and cesarean section wound infections at Mitra Husada Pringsewu Hospital in 2020.

3.2.5. Evaluation

The assessment results obtained a diagnosis of patient Mrs. R is the risk of infection related to the wound post-incision drainage due to subandibular subcutaneous abscess. Nursing interventions carried out include monitoring signs and symptoms of infection, performing wound care, and collaborating on administering analgesic drugs. The nursing implementation that has been carried out by the author is monitoring signs and symptoms of infection by performing wound care.

The evaluation results obtained by the author after conducting observations and carrying out wound care for 2 days were that the patient said the pain had decreased in the submandibular area, there was...The wound has improved, it has dried a little, there is no redness, the stitches are neat and clean, they have closed and the pain has reduced, the patient looks relaxed, can sit and eat a little and chew slowly, so the problem of the risk of infection due to invasive procedures has been resolved, this is in line with research(Admaja et al., 2024)Wound prevention by implementing monitoring of signs and symptoms of local and systemic infections, providing skin care, results obtained, clean wounds without signs of infection such as redness, swelling, or increased temperature, but pain is still felt and there is no functional impairment.

4. Conclusion

Based on the assessment results conducted up to the nursing diagnosis stage, it can be concluded that the patient is at risk of infection related to the invasive procedure, namely incision drainage for a subcutaneous subamndibular abscess. After monitoring for signs and symptoms of infection, wound care can be used to reduce the risk of infection in the surgical wound. Evaluation ResultsThe patient said the pain had decreased in the submandibular area, there wasThe wound has improved, it has dried a little, there is no redness, the stitches are neat and clean, they have closed and the pain has reduced, the patient looks relaxed, can sit and eat a little and chew slowly, so the problem of the risk of infection due to invasive procedures has been resolved.Therefore, wound care can be an effective intervention, provided that it complies with the operational procedures (SOP) for sterile wound care and the patient is committed to maintaining cleanliness, especially in the surgical area.This shows that sterile wound care has a very important influence on the risk of infection due to invasive procedures.Delayed diagnosis or misdiagnosis can result in complications such as mediastinitis, sepsis, and even death due to airway obstruction.(Litha et al., 2021).

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