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Effect Of Debridement On Mandibula Abscess Patients: Case Study

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ABSTRACT

The mandibular abscess is a collection of Pus Pus) in the latent space between the neck cavities caused by aerobic, anaerobic, or mixed bacteria. The most common pathogen found from culture results is streptococcus viridian, staphylococcus epidermidis, staphylococcus aureus, streptococcus hemolytic, fusobacterium bacteria, peptostreptococcus species, Neisseria, klebsiella pneumonia, and pseudo mom. It spreads from various sources of infection, such as teeth, mouth, throat, paranasal sinuses, ears, and neck. This paper aims to provide nursing care for patients who experience postoperative abscess debridement. The research design used is a case study to explore the nursing problems of patients who experience postoperative debridement with acute pain at Adjidarmo Hospital, Lebak-Banten. Data collection through interviews, observation, physical examination, and documentation study. Based on the study's results, it was found that the patient complained of pain in the area of the former operation, pain radiating from the ear to the lower jaw with a pain scale of 7 (0-10) and intermittent. The wound contained Pus. The patient has no appetite, can only finish ½ portion of porridge, has difficulty swallowing, and has difficulty opening his mouth. The results of the leukocyte laboratory examination: 19,900 /µL and the results of the X-ray examination: Mandible (+). Nursing problems that arise are acute pain, infection, anxiety, and the risk of nutritional deficits. The interventions made refer to SIKI and SLKI. The implementation carried out refers to the intervention. The evaluation found nursing problems Mrs. A resolved on the third day with the criteria for decreased pain results with a pain scale of 3 (0-10), no spread of the wound and no pus, and the patient could open his mouth so that his appetite increased. He could finish one portion of food.

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1. INTRODUCTION

The abscess is an infectious disease that is often found in the community. The abscess that usually occurs is a mandibular abscess, where this abscess occurs due to a lack of oral hygiene. Infection of the teeth and gums is the most crucial factor in the occurrence of a mandibular abscess. About 70% -80% of mandibular abscesses are caused by dental infections. Apart from infection from the teeth, the causes of mandibular abscesses are smoking, infections from the ears and mouth, and due to diabetes mellitus. The incidence of abscesses is currently increasing along with the lack of personal hygiene in society, especially in small communities. (Rima et al., 2016).

According to data, there are more men with abscesses than women, probably due to smoking patterns. According to the results of Zamira's research (Clinical & Dan, 2019), around 75% of abscess sufferers are men. The most frequently found abscesses are mandibular 35%, parapharyngeal abscesses 20%, masticator abscesses 13%, peritonsillar abscesses 9%, and the rest are other abscesses.

In Indonesia, according to Palembang, there were 26 cases of neck abscess and 12 cases of submandibular abscess, 8 cases of peritonsillar abscess, and 6 cases of multiple abscesses.

Based on medical record data obtained at the Adjidarmo Rangkasbitung Hospital, abscesses are included in the top 10 diseases in the Jeruk room. The medical records of Adjidarmo Hospital (2021) and the distribution of the top 10 diseases in the Jeruk room can be seen in the table below.

Table 1. Distribution of the top 10 diseases in the Jeruk room of Adjidarmo Hospital, Rangkasbitung, in 2021

No	Disease name	Amount	process
1	Appendicitis	208	17.3%
2	Head injury	152	12.6%
3	Inguinal hernia	146	12.1%
4	Benign prostate hyperplasia	119	9.9%
5	Snake bites	100	8.3%
6	fracture	75	6.2%
7	Ulcer/gangrene	74	6.1%
8	Soft tissue tumors	66	5.5%
9	Tonsils	37	3%
10	Abscess	35	2.9%
	Amount	**1012**	**1 00%**

Source: Adjidarmo Rangkasbitung Hospital *Medical Record*

In the table above, abscesses are in 10th place, with 35 patients or around 2.9%. This shows that the incidence of abscesses at Ajidarmo Hospital is relatively high. This abscess condition can make the patient sick, uncomfortable, difficult to open the mouth, and difficult to function in the oral cavity. The increase in oral infections in developing countries is caused by malnutrition, poor oral hygiene, tobacco consumption, and areca nut and smoking. Infection in the mouth area can spread to the inner neck space. It can be fatal or life-threatening (Negara, 2019).

Mandibular abscesses, if not treated properly, can cause death. This is because the abscess will spread to other parts, especially the neck, and can attack the upper respiratory tract. Infection in the respiratory tract will cause obstruction/obstruction of the airway. Management of mandibular abscesses may benefit from adequate antibiotic therapy and abscess drainage. Usually, the patient receives intravenous antibiotics for aerobic and anaerobic bacteria. Abscess drainage can be by aspiration or incision and exploration, depending on the extent of the abscess and the complications it causes. Debridement is one of the actions that can be performed on patients with abscesses, and the problem that often occurs in patients after debridement is acute pain. (Ardilla, 2022).

The nurse's role regarding this abscess is to make promotive, preventive, curative, and rehabilitative efforts. Promotive efforts can be made by providing health education about an abscess, including understanding signs and symptoms, causes, prevention, complications, and treatment. Preventive efforts can be made by providing health education about personal hygiene, especially oral hygiene. Curative efforts can be carried out by advising patients to rinse their mouths with salt water and brush their teeth regularly to help kill germs around the mouth so that germs do not spread widely to other organs. Rehabilitative efforts can be made by advising patients to always maintain personal hygiene, especially around the mouth, so that the abscess does not recur.

2. METHODS

This research is a case study that aims to describe the application of nursing knowledge and practice to patients with mandibular abscesses. This case study uses a nursing approach that prioritizes holistic care in the patient's biological, psychological, social and spiritual aspects. The nursing interventions carried out are focused on an interpersonal approach so that a commitment is formed in the implementation provided by nurses in helping to fulfill basic human needs while undergoing treatment at the hospital.

3. RESULTS AND DISCUSSION

Case Illustrations

Mrs. _ A, a 50-year-old woman admitted to the inpatient room with a medical diagnosis of Post-Operational Mandibular Abscess Debridement Operation. The patient experiences pain in the area of the former operation, pain radiating from the ear to the lower jaw with a pain scale of 7 (0-10) and intermittent. The wound has Pus. The patient has no appetite, can only finish ½ portion of porridge, has difficulty swallowing, and has difficulty opening his mouth. The results of the leukocyte laboratory examination: 19,900 /µL and the results of the X-ray examination: Mandible (+). Patients received Cefriaxone 2x1 gram intravenously, Ketorolac 3x30 Mg intravenously, and Metronidazole 3x500 Mg.

Patient Condition

The results of the anamnesis of the causes of the mandibular abscess in Mrs. A started with a toothache for ± one week, gradually swelling and redness was taken to the emergency room. It was recommended to be treated for debridement. The patient's main complaint was pain in the area of the former surgery, pain radiating from the ear to the lower jaw with a pain scale of 7 (0-10) and intermittent. The wound has Pus. The patient has no appetite, can only finish ½ portion of porridge, has difficulty swallowing, and has difficulty opening his mouth. The results of Ny A's vital signs, blood pressure 90/70 mmHg, pulse 90x/min, respiration 20x/min, body temperature 36.1°C, patient's weight 60 kg, patient's height 150 cm, BMI = 26, with overweight interpretation. Since the patient's illness, the patient's weight has decreased by 3 kg from 63 kg to 60 kg.

The results of further studies on Mrs. A found compos mentis awareness data with GCS value of motor response 6, response to speech 5, and response to opening eyes 4. Nurses partially assist with the patient's activities: bathing and wound care. While undergoing treatment at the hospital, the patient feels anxious about the condition of his wound because their issues, fear of not recovering, can be overcome by diligently practicing worship. Nurses carry out nursing actions for three days in the form of observation, therapeutic, education, and collaboration. The nursing interventions aim to overcome problems, namely Acute Pain, Infection, and Risk for Nutritional Deficits. The intervention stage is divided into two, namely, the preparation stage and the implementation stage.

In the preparatory stage, nurses provide health education about the function of nursing interventions and the goals to be achieved. The nurse then establishes the patient's commitment to participate in regular nursing interventions actively. At the implementation stage, the nurse provides therapeutic measures to replace the bandage on the wound, teaches deep breathing techniques to reduce pain, recommends eating little but often and collaborates with the medical team in administering antibiotic and anti-inflammatory therapy, and collaborates with nutritionists in providing liquid diet food /soft.

After three days of treatment, nursing problems at Mrs. A resolved with the criteria for decreased pain results with a pain scale of 3 (0-10). There is no spread of the wound and no pus, and the patient can open his mouth so that his appetite increases and he can finish one portion of food.

Discussion

1. Assessment

According to, mandibular abscess infection can be caused by aerobic, anaerobic, or mixed bacteria. The most common pathogens from culture results are Streptococcus viridian, Staphylococcus epidermidis, Staphylococcus aureus, Streptococcus hemolytic, Fusobacterium bacteria, Peptostreptococcus species, Neisseria, Klebsiella. pneumoniae and pseudomo. Submandibular infections from oral cavity infections, the most common bacteria found are group streptococcus and anaerobic bacteria. The type of Streptococcus is a type of bacteria that is commonly found in patients with mandibular abscesses, which are caused by infections of the oral cavity, namely Streptococcus viridans, while submandibular abscesses are not due to infections of the oral cavity, where most common cases found are cases of Staphylococcus aureus.

According to Al Fadhil (2020), a study of abscess patients found abnormal data on the main complaint: the main complaint is that the patient usually has to swell in the submandibular area, accompanied by pain and difficulty opening the mouth. Past medical history: previously, there was a

history of toothache, nutritional pattern: in patients with abscesses, there is generally no appetite, decreased appetite, sleep rest patterns: in patients with abscesses, their sleep activity will experience disturbances caused by pain, personal hygiene patterns: in patients with abscesses there will be a self-care deficit caused by increased pain if there is too much activity, activity patterns: in activity patterns, abscesses are disrupted due to activities that increase pain a lot, digestive system: in submandibular abscesses, signs of infection are usually found, namely (rubor, calor, dolor, tumor, fungtiolaesa) around the submandibular, maxilla, lips, and also spread to the cheeks, depending on the severity of the infection, the patient will complain of pain in the back of the jaw, difficulty opening the mouth and chewing. Endocrine system: there is an enlargement of the thyroid gland, integumentary system: in patients with abscesses, redness of the skin is found, and there is also an increase in temperature in the area around the skin due to abscesses; nervous system: in patients with abscesses there will be disturbances in the X nerve (swallowing).

After the authors assessed the causes of mandibular abscess in Mrs. A, which started with a toothache for ± one week, gradually swelling and redness were taken to the emergency room. It was recommended to be treated for debridement. The patient's main complaint was pain in the area of the former operation, pain radiating from the ear to the lower jaw with a pain scale of 7 (0-10) and intermittent. The wound has Pus. The patient has no appetite, can only finish ½ portion of porridge, has difficulty swallowing, and has difficulty opening his mouth.

The results of the leukocyte laboratory examination: 19,900 /µL and the results of the X-ray examination: Mandible (+). Patients received Cefriaxone 2x1 gram intravenously, Ketorolac 3x30 Mg intravenously, and Metronidazole 3x500 Mg.

Based on the theory and facts above, there is a gap. When the study was carried out, there were differences, namely in the pattern of activity and in the endocrine system, because when Mrs. A did not complain of an enlargement of the thyroid gland and did not experience disturbances in her activity patterns because nurses and her family assisted her basic needs.

2. Nursing diagnoses

According to LeMone (2017), nursing diagnoses in patients with integumentary system disorders, preoperatively, namely:

1. Acute pain is related to the physical damaging agent (abscess).
2. The risk of infection is characterized by the inadequate secondary defense (suppression of inflammation).
3. Anxiety related to less exposure to information.

According to, nursing diagnoses in postoperative abscess patients are:

1. Damage to tissue integrity related to mechanical factors (surgery).
2. Hyperthermia is associated with the disease process (infection).
3. Acute pain related to the physical damaging agent (surgical procedure).
4. The effects of invasive procedures characterize the risk of infection.
5. The risk for nutritional deficits is characterized by the inability to swallow food.

After conducting a diagnostic study that emerged in the case, namely:

1. Acute pain related to physiological injury agents (inflammation).
2. Infection-related to the effects of invasive procedures.
3. Risk for nutritional deficit related to an inability to swallow food.

Based on the theory and facts above, there is a gap because the diagnosis was postoperative debridement when the patient was assessed. Only three problems were prioritized for patients: acute pain, infection, and risk of nutritional deficits.

3. Nursing Planning

According to the POKJA SIKI PPNI TEAM (2018), interventions carried out with pain diagnosis are pain management, observation: of location, characteristics, duration, frequency, quality, pain intensity, identification of pain scale, identification of non-verbal pain responses, identification of aggravating factors and relieve pain, identify knowledge and beliefs about pain, identify cultural influences on pain response, identify the effect of pain on quality of life, monitor the success of

complementary therapies that have been given, monitor side effects of using analgesics. Therapeutic: provide non-pharmacological techniques to reduce pain (e.g., TENS, hypnosis, acupressure, music therapy, biofeedback, massage therapy, aromatherapy, guided imagery techniques, warm/cold compresses, play therapy), environmental controls that exacerbate pain (e.g., Room temperature, lighting, noise), facilitate rest and sleep, consider the type and source of pain in selecting pain relief strategies. Education: Explain pain causes, periods, and triggers; explain pain relief strategies. Suggest self-monitoring of pain. Suggest using analgesics appropriately, and teach non-pharmacological techniques to reduce pain. Collaboration: collaboration administration of analgesics.

Interventions performed with acute pain problems in patients in NY. A, namely identification of location, characteristics, duration, frequency, quality of pain, pain scale, explanation of pain relief strategies, and the collaboration of administering ketorolac 3x30 mg analgesic intravenously.

So it can be concluded that there is a gap between theory and fact because the intervention given to Mrs. A corresponds to the problem.

4. Nursing actions

Nursing action is a series of activities carried out by nurses to help patients with health problems by describing expected outcome criteria. Implementation must be driven by patient demand, other factors that affect nursing needs, and nursing strategies to carry out nursing activities according to planned nursing plans.

Implementing nursing actions performed in NY, A top priority is the acute pain problem. All implementations were carried out according to the interventions made for three days. The nursing actions included identifying the location, characteristics, duration, frequency, and quality of pain, identifying pain scales, explaining pain relief strategies, and giving ing ketorolac 3x30 mg analgesic intravenous route.

Based on theory and facts on the implementation of Mrs. A, there is no gap because all implementations are carried out according to the intervention. The expected results are reduced pain with a pain scale of 3 (0-10). There is no spread of the wound and no pus, and the patient can open his mouth so that his appetite increases and he can spend one portion of food.

5. Evaluation

Nursing evaluation is the final step in a series of helpful nursing care processes. The purpose of a nursing evaluation is to achieve success in planning and implementing nursing actions that have been carried out to meet patient needs. Evaluation is a step that determines whether the goal is achieved following the expected outcome criteria. Evaluation of Mrs. A for the three nursing problems planned to be implemented can be resolved within three days.

First diagnosis: pain problem resolved on day 3 with outcome criteria: reduced complaints of pain, decreased anxiety, decreased protective attitude towards pain, reduced pain scale of 3 (0-10). The 2nd diagnosis with an infection problem was resolved on the 3rd day with the results criteria: decreased redness, decreased swelling, improved culture of the wound area, and no pus. The 3rd diagnosis of the problem of the risk of nutritional deficits was also resolved on day 3 with the results criteria: increased masticatory muscle strength, swallowing muscle strength, and improved appetite to spend one portion of food. Based on the results of the evaluation of nursing care, it was found that all problems were resolved because the outcome criteria followed the expected standards.

4. CONCLUSION

Mrs. A is a patient diagnosed with Postoperative Abscess Mandibular Abscess compos mentis who experiences pain in the area of the former surgery, pain radiating from the ear to the lower jaw with a pain scale of 7 (0-10) and intermittent, the wound has Pus. The patient has no appetite, can only finish ½ portion of porridge, has difficulty swallowing, and has difficulty opening his mouth.

The results of the leukocyte laboratory examination: 19,900 /µL and the results of the X-ray examination: Mandible (+). Patients received Cefriaxone 2x1 gram intravenously, Ketorolac 3x30 Mg intravenously, and Metronidazole 3x500 Mg.

The diagnosis raised in the patient Mrs. A is acute pain, infection, and risk of nutritional deficits.

As for the implementation on Mrs. A, namely, the nurse provides therapeutic action to replace the bandage on the wound, teaches deep breathing techniques to reduce pain, recommends eating little but often, and collaborates with the medical team in administering antibiotic and anti-inflammatory therapy, and collaborates with nutritionists in providing liquid diet food/ soft.

The nursing problem Mrs. A resolved on the third day with the criteria for decreased pain results with a pain scale of 3 (0-10). There was no spread of the wound and no pus. The patient could open his mouth, so his appetite increased, and he could finish one portion of food. Caring and motivation are the keys to providing nursing care to achieve optimal healing

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