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Case Study: Application of Evidence-Based Nursing Warm Compresses to Reduce Pain Levels in Children with Lymphadenopathy in the Wijaya Kusuma Ward at Kardinah Regional General Hospital, Tegal City

Atik Ratna Kuning Budi Rahayu[1], Dwiyanti Purbasari[1], Nonok Karlina[1]
[1]*Institut Teknologi dan Kesehatan Mahardika, Cirebon, Indonesia*

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Corresponding Author :
Atik Ratna Kuning Budi Rahayu
E-mail : spanjuhatik@gmail.com
Phone Number : 085775557792

ABSTRACT

Background & Objective: Lymphadenopathy is the enlargement of lymph nodes or a condition in which lymph nodes become enlarged to a size greater than 1 cm and the epicondylar lymph nodes are palpable with a size greater than 5 mm, which is an abnormal condition. **Method:** This study employed a qualitative approach using a case study design with a nursing perspective. **Result:** The case study results indicated that warm compresses were effective in reducing acute pain in An. N.S.A. with lymphadenopathy. **Conclusion:** After receiving nursing care for 4 days, the evaluation results for the initial diagnosis were supported by the client's subjective data stating that the pain was no longer felt, reinforced by objective data showing a body temperature of 36.5°C, a pulse rate of 95 beats per minute, a respiration rate of 20 breaths per minute, and no further pain reported on the pain scale. The assessment results indicated that the issue was resolved, and the intervention plan was discontinued as the intervention had been implemented for 4 days. In the second diagnostic evaluation, the subjective findings indicated that the client's family reported that the child had finished their meal portion. This was supported by objective data showing that the patient did not appear pale and had finished their meal portion. The assessment concluded that the issue had been resolved, and the intervention plan was discontinued as the necessary actions had been implemented over the 4-day period.

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Introduction

Enlarged lymph nodes (KGB) or lymphadenopathy is an enlargement of more than 1 cm in size. Based on their location, lymphadenopathy is divided into generalized and localized lymphadenopathy. (Oehadian, 2018). Lymphadenopathy is an abnormality in the size or characteristics of lymph nodes. Palpable supraclavicular, iliac, or popliteal lymph nodes of any size, and palpable axillary lymph nodes larger than 5mm, constitute an abnormal condition (Oehadian, 2018). Based on these two definitions, the author concludes that lymphadenopathy is the enlargement of lymphatic glands or a condition where lymph nodes enlarge to a size greater than 1 cm and the palpation of axillary lymph nodes larger than 5 mm constitutes an abnormal condition. The onset of this disease is marked by the appearance of lumps in the lymphatic channels, such as the armpits, neck, and so on. Infected lymph nodes will enlarge and are usually soft and painful to the touch. Sometimes the skin above them appears red and feels warm (Namiduru, 2018).

According to (Hana Fadhilla, 2024), lymphadenitis in children is a medical issue that often causes concern for parents and healthcare providers. This condition occurs when the lymph nodes become inflamed, which can be triggered by various factors, including bacterial infections or an immune system reaction. Lymph nodes play a crucial role in the immune system, filtering harmful substances and fighting infections. Typically, lymphadenitis occurs as a response to an infection in the area near the affected lymph nodes.

In children, lymphadenitis is most commonly reported in the cervical, axillary, and inguinal lymph nodes. Lymphadenitis is the most frequently observed clinical manifestation in patients with extrapulmonary tuberculosis. This finding is observed in 30–40% of cases of extrapulmonary tuberculosis and is most commonly found in the cervical region. In addition to tuberculosis, lymphadenitis can also be caused by non-tuberculous mycobacteria (NTM). Lymphadenitis caused by NTM most commonly occurs in immunocompetent children under 4 years of age. The incidence rate is reported to range from 0.6–4.5 per 100,000 children and most commonly affects the cervicofacial region. To date, there is no data available to indicate the national incidence rate of lymphadenitis in Indonesia. The current studies are epidemiological studies conducted in hospitals on a smaller scale (Hana Fadhilla, 2024).

Pain is an unpleasant sensation for many people. Pain is often associated with bodily damage, serving as a warning of actual or potential threats. The need to be free from pain is one of the basic needs that forms the basis for providing care to a patient. (Andarmoyo, 2013).

The Head-to-Toe Physical Examination is a technique used in data collection through the investigation of the body's condition to determine the patient's health status, including the condition of patients with pain. The techniques used in the physical examination include inspection, palpation, percussion, and auscultation. A physical examination is conducted comprehensively, including vital signs, anthropometry, level of consciousness, and a systemic *head-to-toe* examination from head to toe. (Annisa, 2016) A physical examination is used to obtain objective data from the patient's medical history. Pain is highly individual, with many factors influencing it, leading to different perceptions between individuals. Therefore, assessments may vary depending on who is being assessed, their age, race, and condition (Loretz in Rezeki, 2020).

The therapies commonly used to reduce pain levels in patients with lymphadenopathy in the Wijaya Kusuma Atas ward of Kardinah General Hospital in Tegal City include pharmacological and non-pharmacological therapies. Among the non-pharmacological therapies used are *tepid sponge* therapy (warm water compresses), and for pharmacological therapy, antipyretic medications such as paracetamol or ibuprofen are administered. These therapies are effective in reducing the patient's body temperature.

Based on the above background, the researcher conducted a case study titled "Case Study: The Application of *Evidence-Based Nursing* Warm Compresses to Reduce Pain Levels in Children with Lymphadenopathy in the Wijaya Kusuma Atas Ward of Kardinah General Hospital in Tegal City."

Objective

In this case study, the research focused on one individual and first identified the nursing care for the child, then administered warm compress therapy as one method to reduce pain caused by lymphadenopathy. Based on the above description, the purpose of this case study is to determine the application of *evidence-based nursing* warm compresses on pain reduction in children with lymphadenopathy in the Wijaya Kusuma Atas ward of Kardinah General Hospital in Tegal City.

Method

This study uses a qualitative approach with a case study design and a nursing approach. The qualitative approach is a research approach based on post-positivist philosophy, which is useful for investigating natural phenomena (as opposed to experiments), where the researcher serves as the primary tool. Data collection methods in qualitative research are inductive or qualitative, emphasizing meaning and generalization as the results of qualitative research (Sugiyono, 2016).

According to Creswell (2020), case study research refers to research activities that involve detailed and in-depth studies of events, procedures, programs, and activities of an individual or group. The case under study is limited by time and space, so the data collection process is carried out in detail through various continuous data mining processes. The purpose of using qualitative research is for the researcher to collect data by explaining the application of evidence-based nursing warm compresses to reduce pain levels in children with fever in the Wijaya Kusuma ward at Kardinah Regional General Hospital in Tegal City.

Results

After 4 days of intervention involving the application of warm compresses to patients with fever, the initial diagnosis was acute pain associated with symptoms of the disease (lymphadenopathy), characterized by swelling on the right side of the client. The goal or criteria after the nursing intervention over 4x7 hours is expected to reduce pain, with criteria including reduced swelling, reduced pain, and decreased pulse rate. The first nursing plan implemented was the application of warm compresses, with the intervention of checking the temperature of the compress device, with the rationale being to determine the appropriate temperature for the compress. Warm compresses were applied to the swollen area, with the rationale being to reduce pain, and the procedure for applying warm compresses was explained. The rationale is to teach the family, client, and nurse how to administer medication. The medication

therapy provided is paracetamol 3x200mg, ranitidine 3x20mg, and RL infusion. (Collaboration between the attending physician, pharmacist, and nutritionist).

The second diagnosis is nutritional deficiency related to the inability to swallow food, with specific goals and criteria. After nursing interventions are performed over 4x7 hours, it is expected that the swallowing status will improve, with criteria including improved chewing ability, decreased difficulty swallowing, and reduced vomiting. The second nursing plan raised according to SIKI is Weight Promotion with the intervention of monitoring nausea and vomiting with the rationale of determining whether there is nausea and vomiting, monitoring body weight with the rationale of determining the client's weight development, providing food appropriate to the patient's condition with the rationale of facilitating the patient to eat according to their needs, explaining the causes of weight loss in patients with the rationale of providing education and explanation, collaborating with nutritionists regarding food appropriate to the patient's condition with the rationale of providing food appropriate to the patient's needs.

After providing nursing care for 4 days, the evaluation results for the first diagnosis were supported by subjective data from the client stating that the pain was no longer felt, supported by objective data showing a body temperature of 36.5°C, a pulse rate of 95 beats per minute, a respiration rate of 20 breaths per minute, and no further pain reported. The assessment results indicated that the issue was resolved, and the intervention plan was discontinued since the intervention had been implemented for 4 days.

Meanwhile, in the second diagnosis evaluation, the subjective results obtained from the client's family indicated that the child had finished their meal portion, and the objective data was reinforced by objective data showing that the patient did not appear pale and had finished their meal portion. The assessment results indicated that the issue had been resolved, and the intervention plan was discontinued since the intervention had been implemented for 4 days.

Discussion

This discussion will explain the nursing care provided to patients with acute pain in lymphadenopathy who have undergone intervention at Kardinah Regional General Hospital in Tegal Wijaya Kusuma At Kardinah Regional General Hospital in Tegal. Nursing care includes assessment, nursing diagnosis, nursing planning, implementation, and nursing evaluation.

Nursing Assessment

Patient An N.S.A, a 6-year-old female. The patient is still in elementary school (SD) and was admitted to Kardinah General Hospital in Tegal City on December 4, 2025, with complaints of fever for the past two days and pain in the right jaw. During the assessment, vital signs were obtained as follows: Temperature: 37.5°C. Pulse: 122 beats per minute. Respiratory rate: 20 breaths per minute. A pain assessment scale was conducted, with the following results: P: the patient reported pain in the left jaw, Q: like being stabbed, R: the patient appeared to be grimacing, S: pain scale 5, T: intermittent. Previously, the patient was hospitalized about two years ago for three days, and the client's family said that their child had experienced the same thing two years ago for three days. After assessment, the client had no history of surgery and no allergies to medication or food.

When asked about the client's mother's family history, the client stated that there is a family history of hypertension. The assessment continued regarding the client's mother's pregnancy and childbirth history, with the client stating that she has been pregnant and given birth three times, with no history of abortion. The client's mother regularly underwent prenatal check-ups at Tegal Islamic Hospital, and there were no issues during the pregnancies.

Psychosocial, spiritual, and cultural history: The child is cared for by their parents, and the relationship with the parents is very good. The patient's relationship with siblings is also very good. The patient's relationship with peers is very good, and she enjoys playing with peers. The child's overall demeanor is good. The child's response to illness is fussiness. The child's response to healthcare providers appears fearful. The child's response to separation appears anxious. The family's response to the child's illness appears restless and anxious, but there are no other complaints.

The patient's religious beliefs are Islamic. Religious activities performed when healthy include prayer and reading the Quran. The family believes that the patient's illness can be cured, and the family is confident that the child will recover. The cultural values embraced by the patient are Javanese. The patient lives in the same house with their parents and two siblings. The social support system provides support to the patient and offers encouragement.

Physical assessment of An N.S.A shows good appearance with compos mentis level of consciousness and pain with a pain scale of 5. Physical examination results show that the client's face is asymmetrical, there is a lump on the right cheek, normal posture, and clean. Skin assessment revealed yellowish skin color, moist texture, temperature of 37.5°C, skin turgor <2 seconds, clean appearance, and no redness. Examination of accessory structures showed a clean appearance, even hair distribution, short nails, and clean appearance. The head examination revealed a round, symmetrical head shape, no wounds or lumps/lesions, clean appearance, and even hair distribution. The neck examination revealed no thyroid gland enlargement, palpable carotid arteries, normal reflexes, and no wounds or infections. the eye examination revealed symmetrical right and left eyes, clean and bright (conjunctiva not anemic, no swelling, and no wounds), the ear examination revealed symmetrical right and left ears, ears appear dirty, no infection, and no medical devices used. Upon examination of the nose, the results showed symmetry between the right and left nostrils, dry nasal mucus, a straight and normal septum, moist mucous membranes, and no respiratory aids or medical devices in place. Upon examination of the cheeks and chin, the results showed no infection, no wounds, and no use of medical devices, asymmetry, and a lump on the right side. No edema on the cheeks. During the lung examination, vesicular breath sounds were heard, with regular breathing at 20 breaths per minute, and no medical devices were in place. During the heart examination, normal results were found with a heartbeat sound of “lup dup,” no infection, no wounds, and no medical devices in place. During the genital examination, the area was clean with no wounds or infection. Back examination showed no infection, wounds, trauma, and no medical devices used. Upper and lower extremities examination showed complete fingers, symmetrical on both sides, no infection/wounds, and an IV line on the extremities.

Nursing Diagnosis

Based on the analysis described, the nursing diagnosis for An. N.S.A is as follows:

1. Acute pain related to disease symptoms (lymphadenopathy), characterized by swelling on the right side of the client
2. Nutritional deficiency related to inability to swallow food, characterized by decreased appetite and inability to chew and swallow food

Nursing Care Plan

The first diagnosis is acute pain associated with disease symptoms (lymphadenopathy), characterized by swelling on the right side of the client. The goal or criteria after nursing intervention for 4x7 hours is expected to reduce pain, with criteria including reduced swelling, reduced pain, and decreased pulse rate. The first nursing plan implemented is a warm/hot compress with the following interventions:

Observation

1. Check the temperature of the compress device
   Rationale: To determine the temperature of the compress

Therapeutic

2. Apply a warm/hot compress to the swollen area
   Rationale: To reduce pain

Education

3. Explain the procedure for the warm/hot compress.
   Rationale: To educate the family and client

Collaboration

4. Medication Administration:
   The medication therapy administered is paracetamol 3x200mg, ranitidine 3x20mg, and RL infusion. (Collaboration between the attending physician, pharmacist, and dietitian)
   Rationale: Collaboration with the attending physician, pharmacist, and dietitian.

Second diagnosis: Nutritional deficiency related to inability to swallow food, with objectives and criteria after nursing interventions over 4x7 hours, aiming for improved swallowing status with criteria including improved chewing ability, reduced difficulty swallowing, and decreased vomiting. The second nursing plan according to SIKI is Weight Promotion with the following interventions:

Observation

1. Monitor for nausea and vomiting. Rationale: To determine the temperature for compression.
   Rationale: To determine if there is nausea and vomiting.
2. Monitor body weight.
   Rationale: To monitor the client's weight progression.

Therapeutic

3. Provide food appropriate to the patient's condition.
   Rationale: To facilitate the patient's ability to eat according to their needs.

Education

4. Explain the causes of weight loss to the patient.
   Rationale: To provide education and explanation.

Collaboration

5. Collaborate with a nutritionist regarding food appropriate for the patient's condition.
   Rationale: To provide food appropriate for the patient's needs.

Evaluation

After providing nursing care for 4 days, the evaluation results for the first diagnosis were obtained: S: The client reported that the pain was no longer felt, supported by objective data showing a body temperature of 36.5°C, a pulse rate of 95 beats per minute, a respiration rate of 20 breaths per minute, and no further pain reported. The assessment results indicated that the issue was resolved, and the intervention plan was discontinued as the intervention had been administered for 4 days.

Meanwhile, in the second diagnosis evaluation, the subjective results showed that the client's family reported that the child had finished their meal portion, supported by objective data indicating that the patient did not appear pale and had finished their meal portion. The assessment results indicated that the issue was resolved, and the intervention plan was discontinued as the intervention had been implemented for 4 days.

Conclusion

Based on the results of the research and discussion regarding the Case Study: Application of Evidence-Based Nursing Warm Compresses to Reduce Pain Levels in Children with Lymphadenopathy in the Wijaya Kusuma Atas Ward of Kardinah General Hospital in Tegal City involving 1 respondent, the following conclusions can be drawn:

The initial diagnosis of acute pain associated with the disease symptoms (lymphadenopathy) was characterized by swelling on the right side of the client. The goal or criteria after implementing nursing interventions for 4x7 hours was to reduce pain, with criteria including reduced swelling, reduced pain, and decreased pulse rate. The first nursing plan implemented was the application of warm compresses. This study aligns with Suwardi Zurimi's (2021) research, which explains that a warm compress is a compress applied to an area with large blood vessels using warm water as a method to lower body temperature.

After implementing nursing care interventions for 4 days, the evaluation results for the first diagnosis showed that the client reported no longer feeling pain, supported by objective data: body temperature 36.5°C, patient's pulse rate 95 beats per minute, respiration rate 20 breaths per minute, and no pain was reported again. The assessment results showed that the problem was resolved, and the intervention plan was discontinued since the intervention had been administered for 4 days.

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