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The Effectiveness of Warm Compresses in HNP Patients to Reduce Pain Levels in the Eri Soedewo Pavilion Room, V Floor, Gatot Soebroto Army Hospital

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Abstract

Background: HNP is a condition in which the annulus fibrosus and nucleus pulposus protrude into the spinal canal. The basis of HNP is the process of intervertebral disc degeneration so that it often occurs in the third and fifth decades. Postoperative is the period after surgery. In general, post-operative patients will experience complaints of pain on a mild to severe scale, if the pain is not treated properly it can interfere with the patient's activities. **Objective:** This case study aims to reduce the level of pain consisting of pharmacological (analgesic therapy) and non-pharmacological actions. One of the non-pharmacological actions that can reduce pain is warm compresses. **Method:** This case study uses a descriptive method in the form of a single case study conducted on one patient with a medical diagnosis of Hernia Nucleus Pulposus who was treated on the 5th Floor of the Eri Sadewo Pavilion, RSPAD Gatot Soebroto, using data collection techniques, namely observation, interviews, and physical examination. The patient was given a non-pharmacological intervention of warm compresses. Implementation was carried out for 3x24 hours. **Results:** The evaluation showed that after being given a warm compress, the patient said the pain was still felt, the pain scale was 4, the intervention was continued independently. **Conclusion:** After conducting a case study that shows that the application of warm compresses to post-operative HNP patients has an effect on reducing the pain scale and providing comfort to patients.

Keywords: Warm Compress; Pain; Post-Operation; Hernia Nucleus Pulposus

Introduction

Herniated Nucleus Pulposus (HNP) is a disorder in which the annulus fibrosus ruptures, causing the nucleus pulposus to protrude and press on the spinal canal. The incidence ranges from 1 to 2% of the population (Irman et al. 2020). HNP is when soft bones are under pressure and the nerves that pass through the spine become compressed and the spine ruptures, causing pain. (Nyaman et al. 2020).

HNP is a disease that often occurs in adults aged 30-50 years and peaks at the age of 40-45 years, which will cause pain due to

the decrease in the contents of the annulus fibrosus from the lumbar intervertebral disc in the spinal canal or rupture of the annulus fibrosus with pressure from the nucleus pulposus which causes compression of the nerve elements. (Fitriyani 2020).

World Health Organization (WHO, 2016). states that the prevalence of Hernia patients is 350 per 100 population. The spread of Hernia is most in developing countries such as countries in Africa and Southeast Asia including Indonesia, and in 2017 there were around 50 million degenerative cases, one of which was

Hernia, with an incidence in developed countries of 17% of the 1000 population, while several countries in Asia suffer from Hernia disease ranging from 59% (WHO, 2017).

The prevalence of lower back pain in Indonesia is estimated to range between 7.6% and 37% (Ikhsanawati et al., 2015). (Ministry of Health, 2015) said that the prevalence of HNP in Indonesia obtained from measuring the population aged 20 years is 25% suffering from back pain and the rest are in the population aged over 30 years. In West Java there are 412,359 cases (39.6%). The prevalence of HNP in Indonesia diagnosed by health workers is 8.4%, and the prevalence of HNP in Indonesia is 25.8%.

Management of patients with HNP can be done with various types including surgery, pharmacological and non-pharmacological therapy. The surgical management performed is a laminectomy operation. Laminectomy is a decompression surgical procedure performed for spinal stenosis or narrowing of the lumbar spine. Laminectomy is a surgical procedure to reduce pressure on the spine or spinal nerve roots due to spinal stenosis (Estefan et al., 2022).

As a result of the surgical procedure, nursing problems arise, one of which is pain. Pain is a type of discomfort that can be experienced by everyone. Although pain can be a warning of an actual or potential threat, pain is subjective and very personal. A person's response to pain is influenced by gender, culture, and other factors (Suwondo et al., 2017).

The pharmacological type is a collaborative approach between nurses and doctors in providing drugs to relieve the sensation of pain. While the non-pharmacological type is an approach to eliminating the sensation of pain with pain management techniques, one of which is providing warm compress therapy. Warm compress is an action to provide warmth to the client by using a liquid or tool that causes warmth in certain parts of the body

that need it (Prihandhani, 2016). In the Eri Soedewo Pavilion, 5th floor, Gatot Soebroto Army Hospital, it was recorded that from December 2020 to May 2021, 41 people were diagnosed with HNP.

Method

This type of case study is descriptive in the form of literature that aims to describe or describe, explain, and validate the phenomenon being studied. In using this type of descriptive research, the problem formulated must be worthy of being raised, invite scientific value, and not be too broad. This case study aims to obtain an overview of the implementation of Nursing Care for Mr. R with post-operative HNP by providing Warm Compress Therapy to Reduce Pain Levels in the Eri Soedewo Pavilion Room, 5th Floor, Gatot Soebroto Army Hospital using a nursing process approach that includes assessment, diagnosis, intervention, implementation, and evaluation of nursing.

Results and Discussion

Focus Data

Subjective Data

The client said pain in the abdomen, P: pain in the abdomen predominantly on the left, Q: Pain like being stabbed, R: pain radiating to the right abdomen, S: pain is felt moderate with a pain scale of 6, T: pain comes and goes with a duration of pain \pm 5 minutes, the patient said. The patient complained of difficulty moving the right and left lower extremities.

Objective Data

The client appeared to wince in pain when pain arose, the client appeared restless, GCSE4M6V5, BP: 128/70 mmHg, N: 87x/minute, RR: 20 x/minute, S: 36 C, Spo2: 99%, IVFD Nacl 0.9% 500ml 20 tpm installed. The patient appeared to be lying weak. Muscle strength decreased. Rom decreased. The surgical wound on the patient's back was wrapped in gauze.

Nursing Diagnosis

The nursing diagnosis is acute pain b. with physical senses (invasive procedures),

impaired physical mobility related to musculoskeletal disorders, risk of infection related to the effects of invasive procedures.

Nursing Interventions

- a. Acute pain related to physical injury agents (invasive procedures) Goal: after nursing actions for 3x24 hours, pain is expected to decrease KH: complaints of pain decrease, difficulty sleeping decreases Observation, Monitor vital signs, Identify pain, Therapeutic, Provide non-pharmacological techniques to relieve pain with warm compresses, Provide a comfortable position, Control the environment that aggravates pain (eg. room temperature, lighting, noise), Education Teach non-pharmacological techniques to reduce pain, Collaboration, Collaboration in providing analgesics ketorolac 3x30mg; painless 400mg
- b. Impaired physical mobility related to musculoskeletal disorders Goal: after nursing actions for 3x24 hours, independent mobilization is expected KH: joint stiffness decreases, muscle strength increases, limb movement increases Observation, Identify pain or other physical complaints, Identify physical tolerance

Nursing Implementation

The next stage after arranging the movement, Monitor heart rate and blood pressure before starting mobilization, Monitor general condition during mobilization, Therapeutic, Facilitate mobilization activities with assistive devices (eg. bed railing), Facilitate movement if necessary, Involve family to help patients improve movement, Education Explain the purpose and procedure of mobilization Encourage early mobilization, Teach simple mobilization that must be done (eg: sitting in bed, sitting on the side of the bed, moving from bed to chair).

Infection risk d.d effects of invasive procedures Goal: after nursing actions for 3x24 hours, infection is expected not to occur. KH: no redness, Observation, Monitor signs of infection, Monitor wound characteristics Therapeutic Education,

Advise to increase fluid intake, Advise to increase nutritional intake Collaboration, Collaboration, administration of antibiotic ceftriaxone 2x1gr nursing plan is to carry out the planned nursing actions. This case study will focus on the priority diagnosis, namely the problem of acute pain related to physical injury agents with the implementation of therapy The implementation carried out on Mr. R is warm compress therapy.

Warm compresses given to patients with abdominal colic function as relaxation of tense muscles in the painful area. Warm compresses use hot water bottles or hot water bags that act by conduction to transfer heat from the bladder into the body so that vasodilation of blood vessels occurs and muscle tension decreases so that pain is reduced. Warm compresses with a temperature of 40°C - 45°C cause vasodilation which can open blood flow, making blood circulation smooth again so that muscle relaxation occurs, resulting in decreased muscle contractions (Black, Joyce M., Hawks, 2014; Ginting et al., 2022; Pinzon, 2016).

In this study, there was a significant change in the pain scale after being given a warm water compress together with the administration of standard analgesic drugs compared to the client's pain scale when the pain was reduced, the pain scale decreased to 3, grimacing decreased. This is proven by research conducted by (Dewi & Irdayani.) (2021) From the results of the study, it can be concluded that giving warm compresses to patients with colic pain is more effective in showing changes in the pain scale marked by the warm compress scale carried out for 3 days starting from May 1 to 3, 2021. only given standard analgesic drugs. This is in line with research conducted by Darsini et al (2019) on 30 adult abdominal colic patients.

This study showed that respondents before being given warm compress treatment were in the moderate pain scale with a percentage of 86.7%. After being given warm compress treatment for 15-20

minutes, there was a change in the pain scale marked by 40% of respondents being in the mild pain range. Giving warm compresses in this study significantly reduced pain in abdominal colic patients (Darsini, 2019).

Nursing Evaluation

After the implementation of warm compresses on Mr. R for 3 days starting from May 1 to 3, 2024, the author conducted an evaluation and obtained results showing that pain in the abdomen in Mr. R has decreased as evidenced by complaints of pain in the moderate pain range when the case study subject was only given analgesics but after being combined with the provision of warm compresses showed a decrease in the pain scale in the mild pain range. The author can conclude that the results of the comparison between the field and the results of previous studies are not much different and effective.

Conclusion

After carrying out nursing actions for 3 days, the results showed that there was a decrease in pain in Mr. R after being given warm compress therapy which was evidenced by complaints of decreased pain, the pain scale decreased from 6 (moderate pain) to a scale of 4 (moderate pain), the client said he was happy and relaxed when warm compress therapy was given. So it can be concluded that the action of giving "Warm Compress Therapy".

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