



A Case Study

Heat Compress to Reduce Chronic Pain in Hepatoma Patients

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ABSTRACT

Background: Hepatoma is an abnormal growth of liver cells, which is characterized by a mass in the right upper abdomen, which can cause chronic pain. Pain arises from tissue damage and inflammation of the liver. One of the nursing interventions that can be done to overcome the main problem of chronic pain is hot compresses.

Objective: This study aims to present nursing care with hot compress intervention as an effort to overcome the main problem of chronic pain in hepatoma patients.

Methods: This case study uses nursing care methods that include assessment, determination of nursing diagnoses, nursing plans, implementation of nursing and nursing evaluation which was carried out for 3 days in the aster room of the Banjar City Hospital. The assessment was carried out by way of history taking and observation. Nursing diagnosis is determined by the IDHS, while the nursing plan is adjusted to the grouping of interventions in SIKI supported by Evidence Based Nursing. Implementation and evaluation of nursing is documented with the SOAPIER model. Giving hot compress therapy to hepatoma patients is given using a bottle covered with a cloth so that the heat does not directly stick to the skin, with a duration of 15 minutes.

Results: After being given a heat compress intervention, the pain scale was reduced from 8 to 2, while the subjective data from the anamnesis, the client said the pain was reduced.

Conclusion: Heat compress therapy can be an effective nursing intervention to reduce chronic pain in hepatoma patients.

INTRODUCTION

The liver is a very vital organ in the human body considering its complex task for the continuity of all body functions. One of the deadly diseases that attack this organ is liver cancer/hepatoma (Teresia et al., 2014). Hepatoma is also known as liver cancer with hepatocellular

carcinoma or primary hepatocellular carcinoma. Hepatoma is an abnormal growth of liver cells characterized by an increase in the number of cells in the liver that have the ability to divide or mitosis accompanied by changes in liver cells that become malignant (Natsir, Amran, & Livi, 2019). Hepatoma is usually characterized by weight loss, loss

of appetite, weakness, not infrequently pain in the pit of the stomach, (Maitra et al., 2015), and the advanced stage of the disease is characterized by jaundice or a yellowish discoloration of the tissue due to the deposition of bilirubin and also an increase in SGOT and SGPT levels (Longo et al., 2014). Levels of SGOT (serum glutamic oxaloacetic transaminase) is an enzyme that is usually found in the liver, heart, muscles, kidneys, and brain. While SGPT (serum glutamic pyruvate transaminase) is the most abundant enzyme in the liver, SGOT and SGPT examinations will be carried out by taking a patient's blood sample, if the results are above normal then there are disturbances in some of these organs (Rampa et al., 2021).

According to WHO (World Health Organization) released by The International Agency for Research on Cancer (IARC), in 2008 there were 748,000 diagnosed hepatoma problems, with the third highest mortality of 696,000 clients dying each year (Teresia et al., 2014). Likewise in Indonesia, cases of hepatoma found at the age of 50-60 years are dominated by men. Comparison of cases that occur between men and women ranges from 2-6: 1. Hepatoma in men ranks fifth and for women ranks ninth (Butar-Butar, 2012). The prevalence in rural areas is higher than in urban areas (1.7%) (Cicale, 2016). This shows the highest number of clients in Pugoh Village with 2 clients out of a total of 9 clients in Bancar District with a population of 57,384 people from the target of 10 per 100,000 population (Retna et al., 2014).

The number of cases of hepatoma caused by the main cause of hepatoma is not known, but there are several risk factors that can lead to a high number of people suffering from hepatitis, namely the increased prevalence of hepatitis B

and C infections, consumption of aflatoxins (food grown with the *Aspergillus flavus* fungus that produces aflatoxins), liver fluke infections. (*Clonorsis Sinensis*), and the habit of consuming alcohol, other factors caused by public ignorance about the disease and the mode of transmission (Ghini et al., 2020). Hepatomas can be formed either by the presence of a hyperechoic mass image and an increase in contrast in the arteries showing neovascularity from a low density liver mass depending on radiological examination. As a result, the patient will feel pain or discomfort in the right-upper quadrant of the abdomen (Jacobson, 2016).

Pain that arises is a condition related to tissue damage, inflammation, as well as a disease process with a short duration (in days or weeks) so that it can be classified as acute pain. (Wijayanti, 2018). And if pain that lasts for a long period, either related to the disease process itself or related to the time to repair of an injury, it is called chronic pain. (Mills S et al., 2016). The International Association for Pain (IASP) defines chronic pain lasting more than 3 months (Hylands et al., 2016).

Based on these requirements, chronic pain can not only be handled and treated using conventional biomedical approaches, but other approaches are needed so that chronic pain sufferers are expected to accept their condition. Management is not only in the form of improving the physical aspect by giving analgesics, intervention or stimulation, but also complaints of psychosocial disorders that often arise in chronic pain need balanced attention (Mills et al., 2016)

That is why, comprehensive nursing care needs to be carried out by paying attention to Evidence Based Nursing

(Setiawan, Roslianti, & Firmansyah, 2020; Suhandha, Setiawan, Ariyanto, & Oktavia, 2021). One of the recommended interventions according to the results of research and standard nursing intervention standards, the management of chronic pain due to mass in the liver in hepatoma disease is hot compresses in the solar plexus. Where giving this hot compress can relieve ischemia by reducing contractions in the solar plexus and smoothing blood vessels so that it can relieve pain by reducing tension and increasing feelings of well-being (Fitra M et al., 2014).

Based on the results of research conducted by (Gustiana, 2016) that hot compresses experienced objective changes, among others, the pain felt reduced from before from a pain scale of 7 to 3, this happened because doing hot compresses at the location of pain would cause a decrease in muscle tension and be able to relax again. In line with the results of research conducted by (Ainun et al., 2017) shows the pain scale of the two respondents after hot compresses with a bladder there is a decrease in the pain scale, namely in the first patient the initial pain scale is 7 to 6 and the second patient is the initial pain scale from 6 to 5.

Therefore, researchers are interested in using this method in hepatoma patients with chronic pain nursing problems and present it as a scientific work in the form of case studies. This case study aims to present nursing care with hot compress intervention as an effort to overcome the main problem of chronic pain in hepatoma patients.

METHOD

This case study used nursing care methods that include 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 way of history taking and observation. Nursing diagnosis is determined by the IDHS based on the analysis of existing data, while the nursing plan is adjusted to the grouping of interventions in the SIKI which is supported by Evidence Based Nursing. Implementation and evaluation of nursing is documented with the SOAPIER model (Firmansyah, Setiawan, Suhandha, Fitriani, & Roslianti, 2018; Widiyanti, Andriani, Firdaus, & Setiawan, 2021). Giving hot compress therapy to hepatoma patients is given using a bottle covered with a cloth so that the heat does not directly stick to the skin, with a duration of 15 minutes.

The five stages carried out in the EBN implementation process consist of: (1) compiling Problem/Population, Intervention, Comparison and Outcome (PICO) questions to be solved, (2) tracing evidence related to cases to be discussed, (3) assessing the evidence presented. obtained in stage two, and (5) evaluation of the implementation of EBN. In the first stage, the question presented refers to PICO, namely "what interventions can be given to relieve pain due to mass in the liver in patients with hepatoma?"

This study was conducted on hepatoma patients at Banjar City Hospital, Aster Room Class IA for 3 days from 23-26 June 2021. First, the procedure was explained to the client prior to intervention. At that time the client agreed by giving verbal consent. Before the EBN is given, a comprehensive assessment of the patient is carried out first, and the implementation is carried out for 15 minutes. How to give a hot compress by using a bottle filled with warm water and wrapped in a cloth, given when the client complains of pain,

and holding the solar plexus.

RESULT

The result, Mr. H admits that the pain is reduced. VAS (Visual Analog Scale) before being given hot compress therapy was on a scale of 8 severe pain (very severe), and after being given the intervention decreased to a scale of 2 mild pain (mild pain). This proves that the hot compress intervention is effective in reducing the pain intensity of Mr. H. The client said that before the intervention was given severe pain until it was difficult to move and when after the intervention the client said the pain was reduced the client also seemed calmer and relaxed.

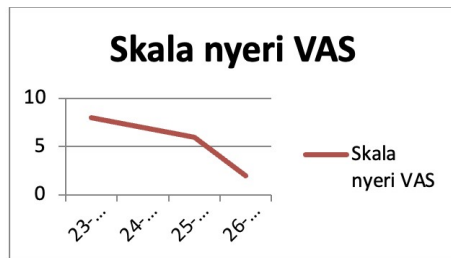


Figure 1. VAS pain scale for 3 days

Figure 1. The implementation of the results of the graph above shows that before and after the hot compress intervention, the 1st day on 23 June 2021 the client felt severe pain and could not move with a pain scale of 8, the 2nd day on 25 June 2021 the client said the pain. Reduced slightly with the pain scale 4, and the last day of the intervention on June 26, 2021 the client said the pain had decreased and the client seemed calmer than the previous one with a pain scale of 2.

DISCUSSION

Almost all hepatomas are associated with chronic injury to liver cells. This injury makes the liver inflamed and increases the rate of hepatocyte change. Injuries make lesions on the liver. Lesions can be classified into regenerative and dysplastic/neoplastic lesions. The regenerative lesions create nodules in the hepatic parenchyma that are enveloped by fibrotic septa in response to necrosis in the liver cells. As a result, chronic pain and tumors in the liver may develop as a result of these lesions. Long infection of up to 10-40 years in cases of cirrhosis of hepatitis B and C makes the virus integrate into the hepatocyte chromosome (Waghray et al., 2015).

Hepatomas can occur with uncontrolled gene mutations and eventually make liver cells grow in the form of tumors or carcinomas. The growth of tumors or cancer cells will eventually press the healthy tissue around the liver causing pain, especially in the upper right quadrant. The pain is chronic and difficult to treat with any analgesic. In addition, the liver can also experience enlargement or hepatomegaly. Hepatomegaly also disrupts the fluid system in the portal, resulting in an increase in blood pressure in the circulatory system in the portal area (Arvind et al., 2015).

Based on research Darsini (2019) conducted at the Lawang Medika Hospital using a pre-experimental method said that hot compresses were useful and had an effect on reducing the intensity of pain in the abdomen. This is in line with the case study of the application of Evidence Based Nursing at the Banjar City Hospital which was carried out on patients aged 50 years with the results that hot compresses can reduce the intensity of pain in the upper abdomen.

The difference lies in the sample, which was conducted by Darsini using 30 patients, while this study only used 1 person. The research method uses pre-experimental, while this study uses the (PICO) method of looking for related evidence, assessing evidence, applying evidence, and evaluating. The hot compress treatment in Darsini's research and this case study both used a bottle filled with warm water wrapped in a cloth.

Giving hot compress intervention known to have a good effect on clients with various inflammatory diseases and also can relieve ischemia by reducing contraction of the solar plexus (Lilis et al., 2021). In patients with abdominal pain can help relax the muscles around the pain area, in line with the theory Wilson (2013) Hot compresses can be used to treat pain and relax tense muscles. Hot compresses are performed using hot jars or hot water bags by conduction where there is a transfer of heat from the bladder into the body so that it will cause dilation of blood vessels and will occur decrease in muscle tension so that the pain felt will be reduced or gone (Bare, 2013).

The use of heat can make blood circulation smooth, smooth vascularization and vasodilation occurs which makes muscles relax, because the muscles get excess nutrients carried by the blood, so that muscle contractions decrease and can also make blood circulation smooth again, resulting in relaxation of the muscles resulting in muscle contraction (Christmas, 2013).

CONCLUSION

The results of the implementation of EBN in the form of consistent hot compress therapy are very influential in reducing pain intensity in hepatoma patients. Based on this research, which was car-

ried out by evidence-based nursing with the selection of the hot compress method, it can affect clients diagnosed with chronic pain as happened in the case of hepatoma. The compress can cause a decrease in muscle tension, dilation of blood vessels so that the pain that arises will subside. The results of this study can be used as a reference in dealing with clients with chronic pain in nursing practice.

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