Jurnal Mutiara Ners E.ISSN: 2620-4061
Vol. 6 No. 1 Januari 2023 (P 28-33)

# *CASE STUDY: WARM COMPRESSES OF LEMONGRASS IN CHILDREN WITH FEBRILE SEIZURES WITH HYPERTHERMIA*

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***ABSTRACT***

*Febrile convulsion are seizures due to an increase in body temperature (the rectal temperature is usually more than 38$^{o}$C) the cause is an extracranial process. According to the World Health Organization (WHO) in research conducted by Paudel (2018), it is estimated that in the world more than 21.65 million children have fever and more than 216,000 children die. The problem that arises is hyperthermia, one way to overcome it is to use a warm compress using lemongrass boiled water to lower body temperature. To conduct a case study with an approach to care for children with febrile convulsion with hyperthermia using the application of warm compresses using boiled lemongrass water. This study uses a descriptive case study design through a nursing care approach to children with febrile convulsion in the Jasmine care room at the BLUD RSU Banjar City. Collecting data by means of interviews, observation, physical examination, and documentation. The results of the physical examination during the assessment showed the child's body temperature was 38.5$^{o}$C. Warm compresses of boiled lemongrass were implemented for 4x24 hours with the results showing a decrease in body temperature after being given a warm compress technique using lemongrass boiled water, as indicated by the evaluation results showing a normal body temperature of 37.3$^{o}$C. Implementation of warm compresses using lemongrass boiled water in pediatric patients with febrile convulsion with hyperthermia nursing problems is effective in lowering body temperature.*

***Keywords/Kata Kunci** : **Febrile convulsion, Hyperthermia, Lemongrass Warm Compress***

## 1. INTRODUCTION

Febrile seizures are convulsions caused by increased body temperature (rectal temperature is usually more than 38$^{o}$C) the cause is an extracranial process. (Kakalang et al., 2016). Febrile seizures are also a neurological disorder in children which is very common. Children aged 6 months to 5 years are usually prone to febrile seizures due to an increase in body temperature that exceeds normal measurement limits. (Aswin et al., 2019).

According to the World Health Organization (WHO) in Paudel's research (2018) estimates that in the world more than 21.65 million children experience febrile seizures and 216 thousand more children die. It is estimated that around 4-5% in America cases of febrile seizures are increasing, while in Asia the highest incidence of febrile seizures is in Guam which reaches 14%, India is around 5% - 10%, and in Japan 69%. The incidence of fever in children under 4 years of age has a percentage ranging from 3% - 4% and after 4 years of age the incidence of fever ranges from 6-15%. (Sirait et al., 2021).

In Indonesia cases of febrile seizures are found around 2-4% in children aged 6 months to 5 years. Patients who experience recurrent febrile seizures reach a percentage of 30%, but if the first seizure occurs at the age of less than one year the percentage can increase to 50%. Children aged 1 year or


DOI : https://doi.org/10.51544/jmn.v6i1.2991

less than 2 years are usually the most common occurrence of febrile seizures. In addition, in boys there were more cases of febrile seizures, namely 66% compared to girls, namely 34%. (Susanti & Wahyudi, 2020).

In 2012 in West Java Province the incidence of children with febrile seizures was 2,220 in the hospital for ages from 0-1 years, while at the ages of 1 to 4 years there were 5,696. (T. P. D. PPNI, 2017).

Increased body temperature is the beginning of the occurrence of febrile seizures. If a fever is not treated immediately, it can cause seizures. Before having a seizure, children often experience unusual symptoms such as unresponsive children, body and extremities become stiff, eyeballs roll upwards, difficulty breathing and can even lose consciousness. After 2 minutes these symptoms will usually disappear. Seizures that last more than 15 minutes and occur more than once within 24 hours and are not immediately given first aid can have adverse effects such as experiencing brain paralysis, delayed growth (delays in motor or movement, delays in speaking and thinking) and can even result in death. Seizures occur due to an increase in body temperature, therefore a problem arises in nursing, namely hyperthermia (Sirait et al., 2021).

Hyperthermia is a condition where the body temperature is above normal 37.5oC due to increased temperature regulation in the hypothalamus. Usually the fever experienced in children is affected by changes in the center of heat (thermoregulation) in the hypothalamus (Hasan, 2018).

Warm compresses using lemongrass boiled water are one of the easiest things to do, then lemongrass boiled water can be compressed directly to the forehead or armpit area during a fever. Apart from being an aromatherapy, lemongrass also contains antipyretic properties to reduce body temperature that is too high. The lemongrass plant contains a substance that functions as a warmer, warm compresses with boiled lemongrass water is also an alternative method that has a very low risk and can be done independently (Olviani et al., 2020).

Non-pharmacologically, one way to relieve discomfort due to an increase in body temperature that is too high is by means of warm compresses using lemongrass boiled water. In addition to having a variety of vitamins and other compounds needed by the body, all the good ingredients in lemongrass have anti-bacterial and fungal, anti-inflammatory, diuretic, anti-depressant, analgesic, antipyretic and antioxidant properties. The high content of vitamin C can increase the body's immunity, therefore lemongrass can be used as a mixture of warm compresses to reduce fever. Then, when viewed from other benefits, lemongrass also has the advantage of its very distinctive, refreshing and soothing aroma. There are various ways of compressing warm using lemongrass boiled water, namely by compressing using a towel or washcloth on the forehead, armpits, neck and groin. (Hyulita, 2014).

## 2. RESEARCH METHODS

Pada penelitian ini menggunakan desain In this study using a case study design descriptive writing with the nursing care approach method. The author collects data starting from the assessment stage, determining diagnoses, carrying out nursing interventions, implementing and evaluating patients with febrile seizures with a focus on warm compress intervention using lemon grass with hyperthermia problems in An.R.

In this case study the authors took one patient with a medical diagnosis of febrile seizures to focus on hyperthermia nursing problems. The location and time of the research was carried out in the Melati room of the BLUD Banjar City Hospital. Implementation of warm compresses using


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boiled lemongrass water is carried out for 4 x 24 hours until the patient returns home to recover. The process carried out by the assessment, raising nursing diagnoses, planning, implementation, and also evaluation.

## 3. RESULTS

### Assessment

On May 27, 2022 at 08.30 WIB in the Melati room BLUD Banjar City Hospital, data collection was carried out on An. R is 2 years and 5 months old who is located in the Wangunjaya Village, Cisaga District, Ciamis Regency. The patient's mother complained that the patient had a fever and had seizures. According to the patient's mother, no one in her family had a history of the same disease as her son and Mr. U his father in charge.

After examining the vital signs, the results obtained were a temperature of 38.5oC, a pulse of 55x/minute, and a respiratory rate of 24x/minute. Results were also obtained from the acral examination which felt warm and were given intravenous injection of paracetamol 4x120 mg and an RL infusion of 10 tpm macro was also obtained.

### Nursing diagnoses

Results in the study of patient An. R obtained subjective data from the patient's mother saying the patient had a fever since one day ago, objective data obtained the patient's general condition was weak, warm acral, temperature 38.5oC, respiratory rate 24x/minute and pulse 55x/minute. Then from these results a nursing problem can be formulated that appears according to the Indonesian Nursing Diagnostic Standards (IDHS), namely hyperthermia related to the disease process with the diagnosis number D.0130 on page 284.(T. P. S. D. P. P. PPNI, 2017)

### Intervensi, Implementasi dan Evaluasi

After the nursing problems that arise are found, the researcher determines nursing interventions that can be carried out in hyperthermic patients based on the Indonesian Nursing Intervention Standards (SIKI), namely identifying the causes of hyperthermia, monitoring body temperature, monitoring complications due to hyperthermia, giving oral fluids, recommending bed rest, collaborating on giving antipyretic drugs, give warm compresses using lemongrass, conduct health education about handling febrile seizures and the Indonesian Nursing Outcome Standards (SLKI) include improved body temperature, the patient's skin feels better. (T. P. S. D. P. P. PPNI, 2018)

Implementation of Nursing carried out for An.R patients with a focus on implementation of giving warm compresses of lemongrass boiled water with the results and response of the patient's body temperature slightly decreasing after being given warm compresses using lemongrass boiled water.

The final results of the evaluation after being implemented for 4 x 24 hours, on May 30 2022 obtained Subjective data (S) the patient's mother said the patient had no fever, Objective (O) with a body temperature of 37.3ºC, Assessment (A) hyperthermia, Planning ( P) give warm compresses of lemongrass boiled water, Implementation (I) give warm compresses using lemongrass and Reassessment (R) Intervention is stopped.


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## 4. DISCUSSION

Nursing care was carried out comprehensively for An.R with febrile seizures in the Melati room BLUD RSU Banjar City. In patients An.R, an assessment was carried out on May 27-30 2022 with a nursing process approach covering assessment up to the final stage of evaluation. In theory, the nursing care carried out on An. R is carried out starting from assessment, determining nursing diagnoses, planning nursing interventions, implementing nursing and evaluating nursing.

While in the field on May 27, 2022, an assessment was carried out on An. R by carrying out a comprehensive physical examination at the initial stage then carrying out vital signs examination with a temperature of 38.5$^{o}$C, respiratory rate of 24x/minute and pulse of 55x/minute and found complaints of the patient's mother saying fever and hot feet. In theory according (Supriyanto, 2017), assessment is the initial stage of the nursing care process, at this stage it is important to do because it will determine what should be done in the next stage. The assessment is carried out by means of interviews or questions and answers to obtain patient data such as subjective data and objective data, making observations, and also carrying out a thorough physical examination.

The results of the study obtained priority nursing problems, namely hyperthermia related to the disease process with the diagnosis number D.0130 on page 284 according to the Indonesian Nursing Diagnostic Standards (IDHS). According to the author, this problem occurs due to the invasion of germs or bacteria that enter the host cell and then spread throughout the body and then an inflammatory process occurs, causing an increase in body temperature that exceeds normal limits or can be called a fever and a nursing diagnosis of hyperthermia appears. The author does not find gaps in practice as well as existing theory.

In the nursing diagnosis of hyperthermia related to the disease process, the interventions provided are according to the Indonesian Nursing Intervention Standards (SIKI), namely identification of causes of hyperthermia, monitoring of body temperature, monitoring of complications due to hyperthermia, giving oral fluids, recommending bed rest, collaborating on giving antipyretic drugs, and applying compresses warm. According to the author, the intervention given to patients with febrile seizures is more focused on giving warm compresses using lemongrass boiled water. This method can provide benefits for patients, besides that the method of warm compresses using lemongrass is also very easy to do. If there is a recurrence of fever in a patient, the tools and materials such as lemongrass used are very easy to obtain. Therefore there is a gap between theory and practice in the field due to differences in the provision of interventions.

According to (Arum Lestari, 2018), Lemongrass (Cymbopogon Citratus) apart from being a kitchen spice, lemongrass is also beneficial for health, including as an antipyretic, analgesic, anti-inflammatory, diuretic, and also as aromatherapy. Warm compresses using lemongrass boiled water can reduce fever in children. In addition to the easy way to do it in lemongrass, there are also various ingredients that are beneficial to the body, one of which is as an antipyretic which can reduce fever. In lemongrass also has a substance that is useful as a warmer and has a very low risk when doing warm compresses using boiled lemongrass water. Warm compresses using


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lemongrass boiled water are also effective in lowering body temperature in children. When the authors carried out the warm compress technique using lemongrass boiled water in the field, the patient's body temperature managed to decrease from the initial body temperature of 38.5$^{o}$C to 38.3$^{o}$C after being given warm compresses using lemongrass.

The final result of the evaluation when the patient was given warm compresses using lemongrass boiled water decreased body temperature. At the time of assessment with an initial body temperature of 38.5$^{o}$C then given a warm compress using lemongrass boiled water, it decreased during the evaluation on the first day, namely to 38.3$^{o}$C, the second day the body temperature became 38$^{o}$C, the third day the patient's body temperature became 37.7$^{o}$C and the fourth day is within normal limits to 37.3$^{o}$C. After the body temperature decreased gradually the problem of hyperthermia was resolved and the intervention was stopped.

## 5. CONCLUSION

Implementation of warm compresses using lemongrass boiled water in pediatric patients with febrile convulsions with hyperthermia nursing problems is effective in reducing the body temperature of children with fever.

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