

Effectiveness of Lemongrass Warm Compress Intervention in Pediatric Meningoencephalitis Patients with Signs of Hyperthermia in the Picu Room Rsud Aji Muhammad Parikesit Tenggarong Hospital



Andi Nindya Markang¹, Fatma Zulaikha², Ni Wayan Wiwin³

^{1,2,3}Nursing Study Program, Nursing Professional Program, Muhammadiyah University, East Kalimantan
Jl. Ir. H. Juanda, No. 15, Samarinda, Indonesia

ABSTRACT: Meningoencephalitis is an inflammation that causes symptoms such as fever, severe headaches, convulsions, impaired consciousness and even death if not treated properly. One of the symptoms experienced by meningoencephalitis patients is an increase in body temperature. This body temperature can be treated with compresses. One compress that can be done is to use lemongrass or lemongrass (*Cymbopogon citratus*).

Objective: To intervene with warm lemongrass compresses to reduce body temperature.

Method: Quantitative descriptive with pre-test and post-test. The sample used was 1 child patient who was diagnosed with meningoencephalitis with signs of hyperthermia.

Research Results: After the intervention of giving warm lemongrass compresses for 3 days, significant results were obtained, namely a decrease in body temperature to 36.1°C.

Conclusion: Warm lemongrass compress is effective in reducing body temperature in meningoencephalitis patients.

KEYWORDS: Pediatric Patients, Meningoencephalitis, Warm Compress, Lemongrass, Reducing Body Temperature.

I. INTRODUCTION

Meningoencephalitis is an inflammation of the brain and meninges that can occur in children[1]. This condition requires immediate medical treatment, as it can cause serious long-term complications[2]. Common treatments for children with meningoencephalitis include administering antibiotics or antivirals, intravenous fluid therapy, and symptomatic treatment to reduce symptoms.[3]. However, the number of cases of meningoencephalitis in children is still quite high, including in Indonesia[4].

Various recent studies have been carried out in a similar field, especially in an effort to reduce the number of cases of meningoencephalitis in children[5]. The World Health Organization (WHO) estimates that there are 1.3 million new cases of meningitis with tuberculosis in children every year worldwide.[6]. The death rate due to bacterial meningitis itself can reach 2-30% depending on the bacteria causing it. Although more common in developing countries, meningitis is also a serious health problem for children in Indonesia[7]. Riskesdas survey data (2018) shows that meningitis is still a significant infectious disease in children in Indonesia. The incidence of meningitis in children aged 0-4 years reaches 1.6 per 1000 child population. This indicates that meningitis remains a health problem that needs to be treated seriously in Indonesia[8]. Based on survey results in 2022 in East Kalimantan, there were 150 cases of meningoencephalitis in children. These cases consisted of 85 cases in boys and 65 cases in girls[9]. The majority of cases occur in children aged 1-5 years, followed by children aged 6-10 years and 11-15 years. At Aji Muhammad Parikesit Tenggarong Regional Hospital, 3 cases of meningoencephalitis were also recorded from 118 patients treated in the PICU room during the period July-December 2023[10].

In treating meningoencephalitis, one of the symptoms that needs to be treated is fever. One treatment method that can be used to relieve fever is by using a warm lemongrass compress[11]. Lemongrass contains compounds such as citronellal, geraniol, and myrcene which have been shown to have the effect of reducing inflammation and fighting infection.[12]. However, it is important to note that the use of warm lemongrass compresses is only a supportive treatment and should be used in conjunction with other medical treatments[13].

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In previous research,[14]found that using warm lemongrass compresses could significantly reduce body temperature in pediatric patients who had fever.[15]also found that the use of warm lemongrass compresses was effective in reducing fever in adult patients. Thus, warm lemongrass compresses can be an effective and natural choice for treating fever in children and adults. The aim of this study was to test the effectiveness of the lemongrass warm compress intervention in reducing body temperature in pediatric meningoencephalitis patients.

II. METHODOLOGY

This research uses the nursing clinical practice analysis method to obtain data regarding the use of the innovative lemongrass warm compress intervention to reduce body temperature in pediatric meningoencephalitis patients in the PICU room at Aji Muhammad Parikesit Tenggara Regional Hospital.[16].

This research is a descriptive observational study with a cross-sectional approach with the data taken being child health clinic practice data for meningoencephalitis patients in the PICU room at Aji Muhammad Parikesit Tenggara Regional Hospital. The population of this study was 1 child patient with a diagnosis of meningoencephalitis who was treated in the PICU room at Aji Muhammad Parikesit Tenggara Regional Hospital for 3 days of treatment. The sample for this study was 1 child patient diagnosed with meningoencephalitis[17].

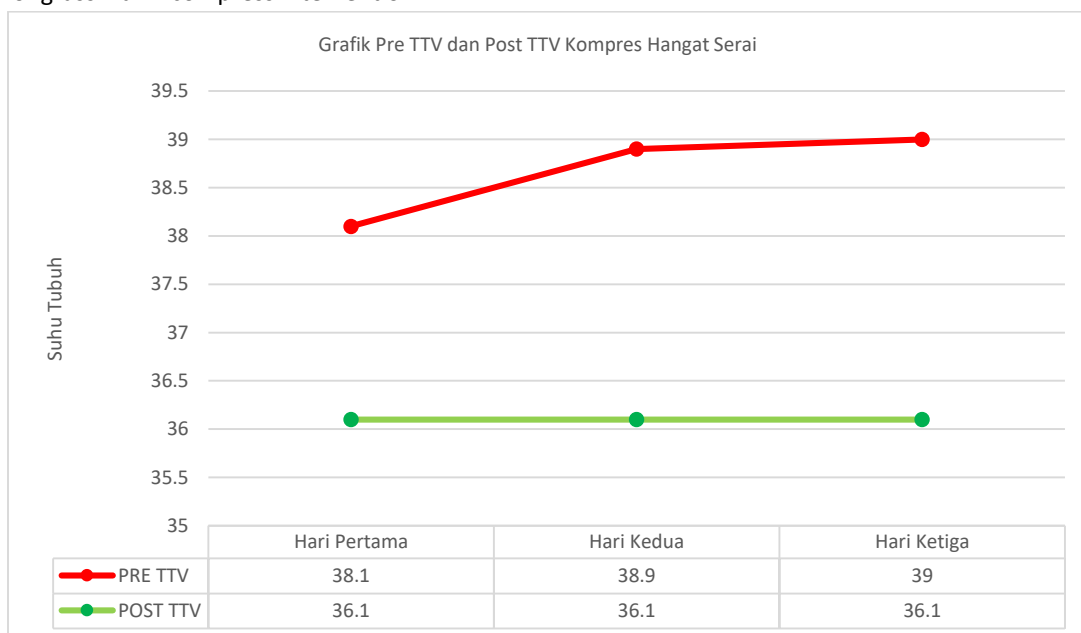
Data will be collected using direct observation of pediatric patients in providing warm lemongrass compress interventions. The data collected included patient demographic data, body temperature data before and after the intervention, as well as clinical practice documentation which included the time of the intervention and techniques for using warm lemongrass compresses.

The intervention used in this study was a warm lemongrass compress which was made by boiling lemongrass with warm water and then placed on parts of the body such as the neck and both axillae of the patient to reduce body temperature. This intervention is carried out for approximately 20-30 minutes and is stopped when the child patient's body temperature returns to the normal range[18].

The data obtained will be analyzed using quantitative descriptive methods with pre-test and post-test to calculate the average decrease in body temperature after the lemongrass warm compress intervention. Apart from that, researchers will also analyze clinical practice documentation to see the frequency and timing of interventions carried out[19].

III. RESULTS AND DISCUSSION

Based on research conducted on pediatric patients with meningoencephalitis in the PICU room at Aji Muhammad Parikesit Tenggara Regional Hospital, warm lemongrass compress intervention has been proven to be effective in reducing body temperature. The results of the study showed that pediatric patients who received the lemongrass warm compress intervention experienced a significant decrease in body temperature of 2-4°C for 3 days of intervention. This shows that this intervention is effective in reducing body temperature in patients with meningoencephalitis. In addition, there were no significant side effects during the lemongrass warm compress intervention.



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This study shows the important relevance of the lemongrass warm compress intervention in clinical nursing practice in pediatric meningoencephalitis patients. On the first day of intervention, the body temperature was 38.1°C decreased to 36.1°C for 25 minutes, the second day the body temperature was 38.9°C decreased to 36.1°C for 22 minutes and on the third day the body temperature was 39.0°C decreased to 36.1°C for 19 minutes.

IV. CONCLUSIONS

Based on the research results, it can be concluded that warm lemongrass compress intervention is effective in reducing body temperature in pediatric meningoencephalitis patients. This research reveals the importance of using innovative interventions in nursing clinical practice to improve the quality of patient care and prevent serious complications such as seizures and brain tissue damage.

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