



ILLUSTRATION OF THE PROVISION OF WATER TEPID SPONGE (WTS) ON REDUCING BODY TEMPERATURE IN TODDLERS WITH HYPERTHERMIA PROBLEMS IN PANICAN VILLAGE

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Abstract

Background: Maintaining children's health is a special concern for parents. Changes in children's health conditions are influenced by changes in weather, one of the symptoms that often occurs in children is fever or hyperthermia. One of the non-pharmacological treatments is by administering Water Tepid Sponge (WTS). Water Tepid Sponge is a combination of warm compress techniques, superficial vascular block compress techniques and wiping techniques. The compression technique is carried out at several points where there are large blood vessels (neck folds, right and left axillary folds, right and left thigh folds) so that vasodilation occurs and then accelerates evaporation and conduction to lower body temperature in children. Objective: To determine the effectiveness of administering Water Tepid Sponge (WTS) to reduce body temperature in toddlers with hyperthermia problems in Panican Village. Method: This study used a descriptive case study with respondents of toddlers with hyperthermia problems. The focus of this case study is the provision of Water Tepid Sponge (WTS) with hyperthermia problems as a nonpharmacological action. This study was conducted in Panican Village for 3 days starting on 23-25 June 2025. Results: After being given Water Tepid Sponge (WTS) for 3 days with 1 meeting within 15-30 minutes using water temperature of 37°C-40°C, the child's body temperature decreased, the initial result was 38.7°C and after being given Water Tepid Sponge (WTS) for 3 days, the result was 37.3°C. Conclusion: Providing Water Tepid Sponge (WTS) can reduce body temperature in toddlers with hyperthermia problems in Panican Village.

Keywords: Hyperthermia, Toddler, Water Tepid Sponge (WTS)

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1. INTRODUCTION

Maintaining children's health is a special concern for parents. During the transition from dry season to rainy season or vice versa, various diseases tend to increase. Changes in children's health conditions are influenced by weather changes, one of the common symptoms being fever or hyperthermia (Faisal, 2021). According to the World Health Organization (WHO), the number of people suffering from fever worldwide in 2022 reached 17 million each year, with an annual mortality rate of 600,000, and 70% of those deaths occurring in Asia (Rukmana et al., 2022).

Based on data from countries such as the United States, Asia, and Indonesia, the incidence of hyperthermia in children aged 1-5 years remains high. According to data from the Central Java Provincial Health Office, in 2019, it was estimated that there were 16-33 million people with hyperthermia, and 500,000-600,000 people died each year due to hyperthermia. Compared to febrile illnesses, which account for around 80-90% of cases in other countries, the number of people with hyperthermia is much higher in Indonesia (Astuti et al., 2023 in Sari et al., 2024).

According to data obtained from the village midwife in Panican Village Health Services, in 2024, from January to December, there were 238 children who experienced hyperthermia. Fever or hyperthermia is a condition where body temperature increases above normal ($>37.5^{\circ}\text{C}$). Changes in the thermoregulatory center or heat center in the hypothalamus cause most fevers in children. Although fever is often considered trivial, it can lead to dehydration and seizures, and even more serious problems (Iqra et al., 2023).

Water Tepid Sponge (WTS) therapy is a combination of warm compress techniques, vascular block compression techniques, and wiping techniques. The compressing technique is applied to several points where large blood vessels are located (neck folds, right and left axillary folds, right and left thigh folds) (Shofiya & Sari, 2024). If Water Tepid Sponge (WTS) is administered correctly and precisely to reduce body temperature in hyperthermia, it can be 15 minutes faster than using antipyretics alone. This action is also easier, more practical, and does not require costs, and can be done independently by the community. The tools and materials used are also easily found because they are commonly used in household activities (Iqra et al., 2023).

According to research conducted by Putri et al. (2020), water tepid sponge is more effective in reducing body temperature compared to warm compresses because water tepid sponge



compresses on five points (neck folds, right and left elbow folds, and right and left thigh folds) and is accompanied by wiping on the stomach and chest. In a study by Muthahharah and Nia (2019), it was found that the body temperature of patients before being given water tepid sponge therapy was 38.6°C, which then decreased to 37.4°C. While the body temperature of the second patient before being given water tepid sponge was 38°C, which then decreased to 37.3°C. Therefore, it can be concluded that Water Tepid Sponge (WTS) is effective in reducing body temperature in patients with hyperthermia.

Based on the above description, the author is interested in compiling a scientific paper on "The Effectiveness of Water Tepid Sponge (WTS) in Reducing Body Temperature in Toddlers with Hyperthermia in Panican Village".

2. RESEARCH METHOD

This scientific paper uses a case study research design. This scientific paper applies a descriptive method, which is an approach to the nursing process consisting of assessment, problem prioritization, intervention, implementation, and evaluation. The descriptive method is a type of research that focuses on more specific goals by describing symptoms and events that are current or actual (Albayani et al., 2022).

The case study in this scientific paper aims to determine the decrease in body temperature clearly and to determine the average result of administering non-pharmacological interventions with Water Tepid Sponge (WTS) in toddler clients (1-3 years old) with hyperthermia. The case study in this scientific paper includes providing interventions and evaluating the results (Shofiya & Sari, 2024).

3. RESULTS AND DISCUSSION

A. Case Study Results

This case study was conducted in Panican Village, RT 12 RW 04, Kemangkon District, Purbalingga Regency, Central Java Province. The data was collected from the respondent's house, which is located in a residential area and close to the author's house. Geographically, Panican Village is bordered by Majasem Village to the north, Kemangkon Village to the east, Kedunglegok Village to the south, and Bakulan Village to the west.

The selection of the case study location in Panican Village was based on data obtained from the village midwife, which showed that in 2024, from January to December, there were 238 children who experienced hyperthermia. The author took 1 respondent, An. P, aged 2 years and 8 months, who was managed for 3 days with Water Tepid Sponge (WTS) using water temperature of 37°C-40°C, with 1 session per day at 6:00-7:00 PM for 15-30 minutes for 3 days.

The respondent met the established criteria, namely having hyperthermia (>37.5°C), being between 1-3 years old, and having parents who were willing to allow their child to participate as a respondent.

B. Discussion



In this case study, we discuss the decrease in body temperature after administering Water Tepid Sponge (WTS) to a child with hyperthermia. Data was collected through interviews and observations with the client's mother and An. P on June 23, 2025, in Panican Village.

The client's identity is An. P, a 2-year-old and 8-month-old female, residing in Panican Village, Rt 12 Rw 04. The client's mother is Ny. K, and the father is Tn. T. The client had previously experienced fever for 1 day. The client's mother was not familiar with Water Tepid Sponge (WTS). The results of the vital sign examination showed a body temperature of 38.7°C, respiratory rate The client's vital signs were: 24 breaths/minute, Pulse rate: 109 beats/minute, The client's skin felt warm, and the lips appeared pale and dry.

Based on the above data, an implementation was carried out by administering Water Tepid Sponge (WTS) to reduce the child's body temperature. This study used one respondent who was given Water Tepid Sponge (WTS) for 3 days, with one session per day in the evening from 6:00-7:00 PM, and the results were measured before and after the intervention (Shofiya & Sari, 2024).

Water Tepid Sponge (WTS) was administered in the evening because, at night, children often experience sleep disturbances, especially when they are ill. This method can provide comfort to the client. This is in line with the theory proposed by Novikasari et al. (2019), which explains that, in addition to being effective in reducing body temperature, Water Tepid Sponge also has physiological effects, such as providing comfort, reducing pain, reducing or preventing muscle spasms, improving blood circulation, and facilitating intestinal peristalsis, as well as providing warmth.

Table 4.2 Body Temperature Measurement Results

No.	Tanggal	Sebelum	Sesudah	Hasil
1.	23Juni2025	38,7°C	38,0°C	0,7
2.	24Juni2025	38,1°C	37,8°C	0,3
3.	25Juni2025	37,9°C	37,3°C	0,6
Rata-Rata				0,53

Based on the data above, a minimal body temperature decrease of 0.3 occurred on June 24, 2025, which may be caused by environmental or activity factors. This is consistent with previous research (Albayani et al., 2022), which states that changes in body temperature in children are influenced by various factors, including environmental factors, body immunity, and activity level. Children who are more active tend to have higher body temperatures than those who are less active.

On June 23 and 25, 2025, a greater decrease in body temperature was observed, with decreases of 0.7 and 0.6, respectively, due to the client meeting their fluid needs of approximately 6 glasses or 1,500 ml per day and getting sufficient rest. This is consistent with the theory explained by (Windawati & Alfianti, 2020), which states that a decrease in body temperature in clients with hyperthermia can be supported by wearing thin clothing, drinking plenty of water (approximately 1,000 ml per day), being placed in a room with a normal temperature, getting sufficient rest, and being given a warm compress.



The administration of Water Tepid Sponge (WTS) was carried out using a combination of warm compress techniques, vascular block compression techniques, and wiping techniques, with compresses applied to several points with large blood vessels (neck folds, right and left axillary folds, right and left thigh folds) for 15-30 minutes with water temperatures ranging from 37°C to 40°C. This is consistent with previous research by Shofiya & Sari (2024).

This states that Water Tepid Sponge (WTS) administered for 3 days, once a day for 15-30 minutes, is effective in reducing body temperature in toddlers (1-3 years old) with hyperthermia. This technique will send a stronger signal to the anterior hypothalamus and provide a signal to the sweat glands, which will then cause vasodilation that accelerates evaporation and conduction, resulting in increased heat loss through the skin by sweating. The initially high body temperature will decrease as sweat is released, potentially reaching normal limits (Iqra et al., 2023).

Based on the results of measuring An. P's body temperature after administering Water Tepid Sponge (WTS), the average decrease in body temperature reached 0.53, indicating a decrease in body temperature in the child. In this case study, the data shows that Water Tepid Sponge (WTS) therapy is effective in reducing body temperature in toddlers (1-3 years old) with hyperthermia.

This case study is in line with research by Hijriani (2019), which states that administering Water Tepid Sponge (WTS) is effective in reducing body temperature. This is achieved by applying a warm water compress at a temperature of 37°C for 15 minutes to areas with large blood vessels, specifically at several points (thigh folds, armpits, and neck), followed by wiping several parts of the body.

4. CONCLUSION

Based on the results of this study, it can be concluded that on June 23-25, 2025, the administration of Water Tepid Sponge (WTS) to An. P was effective in reducing body temperature in patients with hyperthermia, with the following results:

1. The client's body temperature before receiving Water Tepid Sponge (WTS) reached 38.7°C.
2. After receiving Water Tepid Sponge (WTS) for 15-30 minutes over 3 days, with one session per day, the result was 37.3°C.
3. The average result after receiving Water Tepid Sponge (WTS) was 0.53.

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