Erythrina Subumbrans Compress To Reduce Fever Of Children With Hyperthermia

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ABSTRACT

Fever is one of the side effects that occur in the body when getting an attack from outside such as infections due to viruses, bacteria and others and is not the main diagnosis. The content of spare dadap leaves is saponins, flavonoids, polyphenols, tannins, and alkaloids. One of the contents of spare dadap leaves that function as antipyretics is alkaloids and ethanol. The purpose of this study was to determine the effect of spare dadap leaves on reducing body temperature in children with hyperthermy. This research design is Pre-Experimental with a one group pre-test-post test design which in this design allows researchers to test changes that occur after the treatment The number of samples in this study was 15 respondents. This research was conducted from October to November 2022 at PMB Mrs. S Ngawi Regency in 2022.Statistical tests obtained p values of 0.001 < 0.05, meaning that there is an effect of spare dadap leaf compress on reducing body temperature of children with hyperthermy. Based on the results of the study, it can be concluded that spare dadap leaf compresses can be used as an alternative to reduce fever in children with hyperthermy.

I. Introduction

Health is something that is needed by the human body as a living thing. Fever in children is an increase in body temperature above normal. When measured rectally >38°C (100.4°F), measured orally >37.8°C, and when measured axillary >37.2°C (99°F). (Cahyaningrum and Putri, 2017) Fever is the second most common complaint after pain, so fever is an important thing to know. Fever needs to be treated because the fever continues to increase until the temperature is above 38.5° C has the potential for febrile seizures or better known as steps . Fever is one of the side effects that occur in the body when getting an attack from outside such as infections due to viruses, bacteria and others and is not the main diagnosis.(Rahmawati and Purwanto, 2020) Reducing or controlling fever in children can be done by pharmacological and non-pharmacological methods. WHO supports movement to back(Mugiyanto, Slamet and Fatmala, 2018) to nature with advice on the use of herbal medicine in the maintenance of public health, prevention and treatment of various types of diseases, especially for chronic, degenerative and cancer diseases. Spare dadap leaves are one of the plants that are easy to grow and easy to obtain. (Wahyuni and Maa'idah, 2019) People have known spare dadap leaves as efficacious febrifuges since the time of the ancestors. Spare dadap leaves are one of the local wisdom that is thought to be an alternative in reducing fever in children. The content of spare dadap leaves saponins, flavonoids, polyphenols, tannins and alkaloids. (Chotimah, 2019) Wrong One content of spare dadap leaves that function as antipyretics are alkaloids and ethanol.(Shao et al., 2018).

II. Methods

This research is a pre-experimental research with one group pre test – post test. The sampling techniques used in this study are: non probability sampling with techniques Acidental sampling which is a sampling determination technique by taking samples from the entire population. The population in this study was all children aged 1-3 years from October to November 2022 in PMB Ny S Ngawi Regency. The number of samples in the study was 15 children with hyperthermy. The research process is Children who experience hyperthermia are compressed spare dadap leaves that have previously been kneaded until they remove mucus and water from the leaves and then attached to the forehead, armpits and stomach of the child. Applying compresses is done 2-3 times a day for 30 minutes within 3 days then measured body temperature. Spare Dadap leaves are attached to the forehead as compresses. If the leaves dry out, immediately replace them with new leaves and so on until the child's fever goes down.(Saukiyatunnufus and Year, 2022)

III. Results and Discussion

The results of the study can be shown in the table below

Table 1. The effect of spare Dadap Leaf compress on decreasing body temperature of children with hyperthermia

	N	Mean	Min	Max	Std. Deviation	*P Value*
Pre Treatment	15	37,5	37,1	38	,319	*0.001*
Post Treatment	15	36,7	36,4	37	,220	

The results of statistical tests obtained p values of 0.001 < 0.05 meaning that there is an effect of spare dadap leaf compresses on reducing body temperature of children with hyperthermy. Spare dadap leaf *Erythrina variegate* have content of saponins, flavonoids, polyphenols, tannins and alkaloids.(Rahmawati and Purwanto, 2020) One of the contents of spare dadap leaves that function as antipyretics is alkaloids. Alkaloids are cooling the child's skin so that it can reduce the body temperature of children who have hyperthermy.

The way spare dadap leaves work is by the principle of heat transfer through the conduction method. In addition to alkaloids, spare dadap leaves also contain ethanol that can cool.(Pariata, Mediastari and Suta, 2022) Dadap Spare containing ethanol will provide a cooling effect with the conduction method. When the spare dadap leaf is attached to the surface of the skin, heat conduction from the surface of the skin will move to the spare chest and then will replace it with a cold effect. When there is heat transfer from the surface of the skin to the spare chest, there is a decrease in temperature from hot to cold. Through a compress of spare dadap leaves that are cold will then cause the hypothalamus to catch signals through the spinal cord so that body temperature reaches normal again. Mechanism of action Cold compresses stimulate vasoconstriction and shivering so that blood vessels become wide and body temperature becomes normal.(Rahmawati and Purwanto, 2020)

In accordance with previous research, spare dadap leaves have been proven effective in sub-febrile fever categories that have temperatures around 37.5 ° C – 38.5 ° C.(Saukiyatunnufus and Year, 2022) The mechanism of reducing fever in children with compresses using spare dadap leaves begins with the meeting Spare chest with a hot skin surface in which there are blood vessels.

Researchers assume that spare dadap leaves can reduce hyperthermia in children because of the content of alkaloids and ethanol that are cooling so that it will affect the hypothalamus which is in charge of regulating body temperature. When children have fever, spare dadap leaves can be used as an alternative in treating fever so as to minimize the consumption of chemical drugs. Researchers assume that spare dadap leaves can be one option to overcome fever problems in children. The cold

caused by spare dadap leaves will have a comfortable and relaxing effect on children so that it will help reduce the body temperature of children with hyperthermy.

IV. Conclusion

The average body temperature of the child before treatment was 37.5 °C and after treatment 36.7 °C. Based on the results of the study, it can be concluded that spare dadap leaf compresses can be used as an alternative to reduce fever in children with hyperthermy.

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