

EFFECT OF GIVING VIRGIN COCONUT OIL (VCO) TO OVERCOME MILIARIA

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ABSTRAK : PENGARUH PEMBERIAN VIRGIN COCONUT OIL (VCO) UNTUK MENGATASI MILIARIA

Latar belakang : *Miliaria* (Biang keringat) disebabkan oleh udara panas dan lembab, pakaian yang tidak menyerap keringat, sistem kerja kelenjar keringat yang belum sempurna, dan sinar ultraviolet. Keringat bayi menumpuk di bawah kulit, kemudian muncul eritema dan menyebabkan gatal-gatal. Salah satu bentuk terapi alternatif non farmakologis adalah dengan memanfaatkan bahan alami dalam pengelolannya. Salah satu pilihan penggunaan bahan alami untuk merawat kulit bayi adalah minyak kelapa yaitu *Virgin Coconut Oil (VCO)*.

Tujuan : Penelitian ini bertujuan untuk mengetahui pengaruh *Virgin Coconut Oil (VCO)* untuk mengatasi miliaria pada bayi.

Metode : Desain penelitian ini menggunakan *quasy experiment* atau eksperimen semu menggunakan rancangan *pretest-posttest one group design*. Sampel pada penelitian ini adalah bayi usia 0-12 bulan dengan miliaria sebanyak 20 bayi. Analisis data yang digunakan adalah menggunakan uji *Wilcoxon*.

Hasil : Menyatakan nilai signifikansi $0,000 < 0,05$ maka H_0 ditolak dan H_a diterima yang artinya terdapat pengaruh yang signifikan antara tingkat *miliaria* sebelum dan sesudah pemberian VCO. Nilai negatif pada Z menunjukkan bahwa tingkat *miliaria* menurun setelah intervensi VCO. Dengan demikian, pemberian VCO efektif dalam mengurangi *miliaria*.

Kesimpulan : Ada pengaruh signifikan *Virgin Coconut Oil (VCO)* untuk mengatasi *miliaria*.

Saran : Saran untuk orangtua bayi yang mengalami *miliaria* dapat menggunakan *Virgin Coconut Oil (VCO)* sebagai terapi nonfarmakologi untuk mengatasi *miliaria*.

Kata Kunci : *Virgin Coconut Oil (VCO)*, *miliaria*

ABSTRACT

Background: *Miliaria* (prickly heat) is caused by hot and humid air, clothing that doesn't absorb sweat, immature sweat glands, and ultraviolet light. Infant sweat accumulates under the skin, causing erythema and itching. One form of non-pharmacological alternative therapy is to utilize natural ingredients. One option for using natural ingredients to care for infant skin is coconut oil, specifically *Virgin Coconut Oil (VCO)*.

Objective: This study aimed to determine the effect of *Virgin Coconut Oil (VCO)* on treating *miliaria* in infants.

Methods: This study used a quasi-experimental design with a pretest-posttest one-group design. The sample in this study were 20 infants aged 0-12 months with *miliaria*. Data analysis used the *Wilcoxon* test.

Results: A significance value of $0.000 < 0.05$ indicates that H_0 is rejected and H_a is accepted, indicating a significant effect between *miliaria* levels before and after VCO administration. A negative Z-value indicates that *miliaria* levels decreased after VCO intervention. Thus, administering VCO is effective in reducing *miliaria*.

Conclusion: There is a significant effect of *Virgin Coconut Oil (VCO)* in treating *miliaria*.

Recommendation: Parents of infants with *miliaria* are advised to use *Virgin Coconut Oil (VCO)* as a non-pharmacological therapy to treat *miliaria*.

Keywords : *Virgin Coconut Oil (VCO)*, *miliaria*

INTRODUCTION

Indonesia is a country with climate tropical. Because located on the equator. With condition climate said, the Indonesian population is at risk experience *miliaria* (producer) sweat). Problem This often experienced by babies, especially in

cities big moment weather hot and humid. Apart from that, skin a thinner baby makes they more easy exposed infection, irritation, and allergies (Nahira dan Syarif, 2022) . Baby is those who are aged between 0 to 12 months. This time is phase

beginning life man after born from uterus his mother (Katmono dkk., 2021)

Miliaria is skin disorders that appear consequence sweat excessive accompanied by with blockage channel sweat that occurs on the forehead, neck, and part covered body clothes such as the chest and back. Conditions This marked with itching, redness of the skin, and the appearance of Lots bubble small containing water (Nahira dan Syarif, 2022). Miliaria (prostituent) sweat) is visible as spots or rash red (red) young) measuring 1-2 mm which is usually appear on the body babies, especially in the shoulder, neck, and head areas. It is also often called miliaria, heat rash, and prickly heat. The rash resemble pimple small (Araafi, Krisnarto dan Ratnaningrum, 2023). Miliaria (causes sweat) is rash small, itchy, and can cause skin irritation. Babies aged 0 to 12 months currently adapt with environment they, so that they Not yet used to with disease physical, especially problem skin. This is make baby in range age the often feel itchy and hot skin baby more prone to sweating compared to adults Because more sensitive. 70% of body baby consists of from water, which makes skin they more sensitive (Yuliah dkk., 2023).

Causes of miliaria (problem) sweat) among others are weather hot and humid, use clothes that don't fit absorb sweat, and Not yet ripe function gland sweat and exposure ultraviolet rays. Sweat that accumulates under the skin make happen erythema and itching. As time goes by, the method modern and traditional medicine appeared in society. Modern medicine can cause effect side if no used with correct or no in accordance dose, while treatment traditional can utilized with Good If fulfil criteria health. Tradition Indonesian society in treatment traditional covers use material natural, including herbal (Selpiyah dan Suara, 2024). Plants one of the therapy non-pharmacological alternatives is with utilise material natural. One of the choice use material experience for maintenance skin baby is oil coconut. Virgin Coconut Oil (VCO) is oil coconut pure which is only made from fresh non-copra coconut, and in the process no use material chemistry, no heated to a temperature high, and not through purification more continue, because oil coconut pure very natural and stable (Nahira dan Syarif, 2022).

Coconut Oil based component fatty acids are differentiated become oil saturated fatty acids, acids lauric and acid caprate. Content sour caprate in oil coconut can kill viruses. Inside body, acid laurate changed become monocaprine, which is a compound monoglycerides that play a role as an antiviral, antibacterial, antibiotic, and antiprotozoal

(Diningsih dkk., 2021). Oil coconut is also often used as material addition in oil telon (medicine rub) and ceman oil. VCO has level excellent viscosity for skin baby, and the fragrant aroma of coconut can utilized as a soothing aromatherapy babies. Benefits of VCO for skin covering moisturizing, hydrating, firming, and kill germs that cause problem skin (Mela & Bintang, 2021). Virgin Coconut Oil is effective and non-pharmacological therapy implemented in a way independent at home. However, still lots miliaria sufferers who may Not yet know method therapy this. Therefore that is me interested do study this for increase understanding about use of virgin coconut oil on babies who experienced miliaria (Nuraisyah dkk., 2025).

According to report from the World Health Organization (WHO), respectively year recorded that 80% of miliaria cases (problem) sweat) occurs, with 65% of it in infants and toddlers. The Indonesian population faces risk affected by miliaria (protivore sweat) with 49.6% of cases occurs in babies, especially in the area hot and humid urban areas. Babies aged 0-12 months adapt with the surrounding environment, so that No used to with condition health, especially problem skin. As a result, it often baby in range age the experiencing itching and burning. More babies easy sweating compared to adults Because skin they more sensitive. This is caused by 70% composition body baby consists of from water, so that skin they more prone to (Nahira dan Syarif, 2022). Data from the District Health Office Grobogan noted that in 2024 there will be 16,404 babies. According to data from Community Health Center Grobogan in 2024, from January to December, the number baby reached 903 people.

Research in Indonesia shows that 282 of 8919 children suffer from disease miliary skin, making it as disease the 7th most common skin disease in infants and children. miliaria skin can increase up to fifty percent in the area with climate hot and humid. Polyclinic Faculty of Pediatrics (IKA) Faculty of Medicine, University of Indonesia (FKUI) handles 15% of patients who experience disease miliary (Karisma & Lestari, 2017) skin. Prevalence disease skin in Indonesia is still very high, with part large (49.6%) occurs in infants and toddlers, especially in the environment hot and humid urban areas. The government try treat miliaria (producer) sweat) through treatment medical, such as use drug antihistamines, creams hydrocortisone, or calamine lotion, however treatment This can risky when used too often, especially in children Because contain material chemical. Powder sow generally

used by mothers For overcome root cause sweat in babies (Saragih, 2019).

According to study health basis conducted by the Ministry of Health in 2022, found that level incident disease skin in a way national is 6.8% among babies and children toddlers. Provinces that show number disease skin more tall from number national is Central Java with prevalence reached 6.9%. Because the skin own complex, elastic, and sensitive structure to various influence, such as weather, age, type gender, ethnicity, and position body, disease skin generally more often attack children (Sari dan Wibisono, 2021) . Based on national prevalence data for Central Java, it is 6.9%. Based on information from prevalence Nationally, Central Java recorded 6.9%. According to data from the Grobogan Regency Health Office, in 2024 the number of baby reached 16,404 people.

RESEARCH METHODS

Research design This use quasy experiment or experiment pseudo use design pretest- posttest one group design. Stage beginning done pretest with see baby the presence of miliaria then given treatment with give virgin coconut oil (VCO) with method applied to the affected area miliaria for 5

days consecutive with frequency 2 times a day after morning and evening showers. Samples in the study This is baby age 0-12 months with miliaria in 20 babies. The data analysis used is using the Wilcoxon test for see existence influence giving virgin coconut oil (VCO) for overcome miliaria.

RESEARCH RESULTS

Table 1
Characteristics Respondent Frequency Distribution

Characteristics	Frequency	Percentage %
Age		
0-3 months	5	25
4-6 months	7	35
7-9 months	3	15
10-12 months	5	25
Gender		
Woman	12	60
Man	8	40

Based on table 1. can known that from 20 respondents distribution the maximum age is 4-6 months as many as 7 respondents and types most gender is Woman as many as 12 respondents.

Table 2
Frequency Distribution of Pretest and Posttest giving VCO to babies with miliaria

Variables	Amount Before intervention	Percentage %	Amount After intervention	Percentage %
Not Miliaria	0	0	13	65
Miliaria	20	100	7	35

Table 3
Influence Giving Virgin Coconut Oil (VCO) For Overcome Miliaria

Variables	Category Miliria				Z	P		
	Miliaria		Not Miliaria					
	N	%	N	%				
Before intervention	20	100	0	0	20	100	-3,742	0,000
After intervention	3	35	13	65	20	100		

Based on Table 2. Respondents before given Virgin Coconut Oil (VCO) 20 respondents experiencing miliaria and after given VCO there were 13 respondents No experienced miliaria and 7 respondents Still experience miliaria. Table 3. States mark significance $0.000 < 0.05$ then H_0 is rejected and H_a is accepted which means there is significant influence between level miliaria before and after VCO administration. Negative values on Z indicate that level miliaria decrease after VCO intervention. With Thus, giving VCO is effective in reduce miliaria.

DISCUSSION

Based on results study miliaria which was originally reddish and profuse after done application virgin coconut oil for 5 days, every 2x a day, 1 spoon tea smeared thinly and evenly after showering in the morning and evening spots appear small reddish, now baby no experience disturbance skin miliaria. Benefits of Coconut Oil According to (Miladiarsi dkk., 2022). Coconut oil contains natural moisturizing ingredients that are

rich in saturated fatty acids chain medium, which with easy seep in to in layer skin and maintain elasticity as well as elasticity skin. In research (Nahira dan Syarif, 2022) found that coconut oil more safe and effective as maintenance for miliaria or root cause sweat. Apply oil coconut sufficiently on the affected area root cause sweat every morning and evening after bathing. Coconut oil have content sour lauric and acid caprate which can kill viruses.

Table 3. Shows mark p value $0.000 < 0.05$ then H_0 is rejected and H_a is accepted which means there is significant influence between miliaria levels before and after VCO administration. Negative values on Z indicate that miliaria rates are decreasing after VCO intervention. With this, giving VCO is effective in reduce billions of a thing This in line with research conducted by Simanungkalit et.al (2021) which shows existence difference before and after use Virgin Coconut Oil (VCO) in recovery miliaria in infants .

Oil coconut is effective solutions it's safe for preventing dryness and peeling. Coconut oil's benefits for the skin are comparable to those of mineral oil and don't cause harmful side effects. Furthermore, coconut oil can help treat various skin conditions such as miliaria, psoriasis, dermatitis, eczema, and other skin infections. (Katmono dkk., 2021) . Miliaria is a skin disorder caused by excessive sweat production, which blocks the sweat glands, particularly on the forehead, neck, and clothing-covered areas (chest and back). Areas frequently exposed to pressure from clothing or friction are also susceptible to miliaria . This condition is often accompanied by itching, prickling, redness, and the appearance of numerous small, fluid-filled blisters (Andika, 2023; Putra, 2021). often occurs in premature babies due to the differentiation process epidermal cells and immature appendices perfect . Research This show that miliaria occurs in about 40% - 50% of babies new lajir , usually appears at the age of 1-3 months and will disappear in a way experience in 4-6 weeks. However sometimes condition This can endure longer and more widespread area around (Luvilla dkk., 2019).

Miliaria is usually triggered by production gland excessive sweating, blockage channel sweat consequence function glands that are not yet optimal in babies , as well as condition hot and humid air as well as poor ventilation good. Babies who often wearing clothes thick and tight will experience pressure as well as friction that can increase temperature body, hot body, fever, and dampness in the body that is not dried with good after bathing, all that become factor risk occurrence

miliaria. Coconut oil, based on its fatty acid content, falls into the category of saturated fatty acids, lauric acid, and capric acid. The capric acid found in coconut oil can kill viruses. Lauric acid is converted in the body into monolaurin, which has antiviral, antibacterial, antibiotic, and antiprotozoal properties. (Diningsih dkk., 2021).

Virgin Coconut Oil is effective and non-pharmacological therapy done in a way independent at home. One of the choice use material experience For nurse skin baby is oil coconut. Virgin Coconut Oil (VCO) is oil coconut pure which is only produced from fresh non- copra coconut, without use material chemistry and the heating process high and not experience purification more continue, make oil coconut pure very natural and stable (Rangkuti, 2022).

When applied in a way topical, Virgin Coconut Oil (VCO) will react with bacteria on the skin become free fatty acids present in sebum. Sebum functions protect skin from bacteria dangerous Because consists of from long chain fatty acids moderate , as it is in VCO. Free fatty acids also help create environment sour on the surface skin so that can drive away bacteria reason disease (Ramadhani dkk., 2025).

Results as per with research conducted by (Yolandia dkk., 2024) about impact giving virgin coconut oil to miliaria before and after given to babies aged 1-11 months in the Community Health Center area Tamamaung Makasar, results study show that 30 respondents after intervention with virgin coconut oil experience healing miliaria as much as 70%. As well as redness and miliaria in babies reduced at the time done assessment II, III, IV, and V if compared to with assessment I after done applying virgin coconut oil twice a day as much as 1 spoon tea smeared thinly and evenly after bathing in the morning and evening for 5 days.

The results of research conducted by (Karisma & Lestari, 2017) with design study descriptive pre- experimental design with approach one group pretest posttest. Population consists of from all babies who experience miliaria producer sweat totaling 19 babies. The sampling sample done with purposive sampling obtained big sample as many as 11 babies. Research instrument use sheet observation and metlin with observe wide miliaria producer sweat before and after given Virgin Coconut Oil (VCO) on the forehead baby age 0-12 months as well as analyzed use table cross. According to results study from Sari dan Wibisono (2021) which has done to miliaria in infants aged 0-12 months in Purwosari Village, Singosari Malang, the following conclusions were obtained that there is

healing miliaria in infants age 0– 2 months with VCO administration.

CONCLUSION

significance value is $0.000 < 0.05$, so H_0 is rejected and H_a is accepted, which means there is significant influence between level miliaria before and after VCO administration. Negative values on Z indicate that level miliaria decrease after VCO intervention. With this, giving VCO is effective in reduce miliaria. Virgin Coconut Oil is effective and non-pharmacological therapy done in a way independent at home. One of the choice use material experience For nurse skin baby is oil coconut. Virgin Coconut Oil (VCO) will react with bacteria skin become free fatty acids as contained in sebum if used in a way topical. Sebum protects skin from danger microorganisms pathogen Because consists of from long chain fatty acids currently as in VCO.

SUGGESTION

Study This expected can become addition knowledge and make insert For study furthermore in overcome miliaria.

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