
The Effect Of Moisture And Cleanliness Of Clothes On The incidence of dermatophytosis in the fishing community

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Abstract: Dermatophytosis is a group of fungal diseases of the skin caused by dermatophyte fungi. One of the factors that influence fungal disease is the habit of wearing tight or damp clothing. Research of the World Health Organization (WHO) on the incidence of fungal infections of the skin states 20% of people from all over the world experience skin infections with dermatophytosis infections. The prevalence of skin fungal disease in Meukek District, South Aceh Regency is still high (22.06%). This study used a quantitative method with a cross sectional research design. The population in this study were all male fishermen, amounting to 425 people and taking a sample of 50 people randomly, data analysis using the chi-square test and multiple logistic regression. The purpose of this study was to analyze the effect of environmental humidity and clothing hygiene on the incidence of dermatophytosis in fishing communities in Meukek District, South Aceh Regency. The results of this research variable clothing hygiene have a significant relationship with the incidence of dermatophytosis. Meanwhile, humidity variable did not have a significant relationship with the incidence of dermatophytosis. It is recommended to the Meukek District Health Center to increase information about the incidence of dermatophytosis in order to reduce dermatophytosis cases, and periodic skin health checks.

Keywords: Dermatophytosis, physical home environment, personal hygiene

Introduction

Poor hygiene and sanitation are still the biggest health problems in developing countries. According to WHO, unsanitary water, poor sanitation, and poor hygiene are the leading causes of death and the second most common cause of skin disease in developing countries. Improving hygiene and sanitation is the most important step to improve children's health and a top priority in health promotion for developing countries. Dermatophytes spread throughout the world and become a problem, especially in developing countries. Superficial mycosis affects more than 20% to 25% of the population and so it is the most common form of infection. In various countries, there is currently a significant increase in dermatophytosis. Indonesia is a good area for fungal growth, so it can be found almost everywhere. The incidence of fungal disease that occurs in various teaching hospitals in Indonesia varies between 2.93% -27.6%. Although this figure does not reflect the general population.

The factors that play a role in the occurrence of dermatomycosis are a hot climate, poor hygiene and sanitation for some people, the presence of nearby sources of infection, direct contact by people with tinea cruris or by indirect contact such as through the use of shared towels, bedding, and everything else. things that tinea cruris patients have

Methods

This research is an analytical survey research using a cross sectional design, namely tracing for a moment, the subject is observed only momentarily or once. To obtain information about the dependent variable and the independent variable, the measurement was carried out with a general practitioner whom the researcher chose to diagnose dermatophytosis at the time of the study using observation and a questionnaire. (Riyanto, 2011) The research was carried out in the coastal areas in Meukek District, South Aceh Regency, Aceh Province. The population in this study were all male fishermen living in coastal areas in the working area of Puskesmas, Meukek District, South Aceh Regency, as many as 425 people.

The number of samples taken in the study was 50 people, the sampling technique was carried out randomly (random sampling technique), namely by proportional stratified random sampling. To take each sample in each selected village was done by visiting the first house randomly (simple random sampling) through a list of family heads, then conducting interviews, observations and measurements according to the prepared questionnaire. Then move to the next house in multiples of 5 families and so on until the required sample size is met. (Riyanto, 2011)

Result

Table 1. Distribution of Fishermen Communities based on Humidity of Houses in Meukek District, South Aceh Regency

Humidity	Amount	Percentage (%)
Not Eligible	35	70
Qualify	15	30
Total	50	100

Table 2. Distribution of Fishermen Communities based on Cleanliness of Clothing in Meukek District, South Aceh Regency

Clothes cleanliness	Amount	Percentage (%)
Not good	32	64
Good	18	36
Total	50	100

Table 3. The Relationship between Variable Hygiene Clothing and Dermatophytosis Incidence in Fishermen Community in Meukek District, South Aceh Regency

Clothes cleanliness	<i>Occurrence of Dermatophytosis</i>				Total		<i>p</i>
	<i>Dermatofitosis</i>		<i>No Dermatophytosis</i>		n	%	
	N	%	N	%			
Not Good	23	71,9	9	28.1	32	100	0,007
Good	5	27,8	13	72,2	18	100	
Amount	28	56.0	22	44.0	50	100	

Table 4. Relation of Humidity Variables to Dermatophytosis Incidence in Fishermen Communities in Meukek District, South Aceh Regency

Humidity	<i>Occurrence of Dermatophytosis</i>				Total		<i>p</i>
	<i>Dermatofitosis</i>		<i>No Dermatophytosis</i>		n	%	
	n	%	n	%			
Not Eligible	19	54,3	16	45,7	35	100	0,950
Qualify	9	60,0	6	40,0	15	100	
Amount	28	56.0	22	44.0	50	100	

Discussion

According to Isro'in (2012), personal hygiene is an action to maintain one's hygiene and health for physical and psychological well-being. Personal hygiene includes skin hygiene, hair hygiene, dental hygiene, eye hygiene, ear hygiene, and hand, foot and nail hygiene. Skin cleanliness is a major factor that can cause skin disease.

Based on Table 4, it can be seen that the humidity that does not meet the requirements with the incidence of dermatophytosis is mostly affected by dermatophytosis, which is 54.3%, the humidity that meets the requirements is also mostly not dermatophytosis, namely 40.0%. However, statistical test results obtained p value = 0.950, it can be concluded that there is no relationship between moisture and the incidence of dermatophytosis.

Meukek Subdistrict, South Aceh Regency, which is located in the coastal area, the majority of the population works as fishermen. The residents who work as fishermen suffer from skin disorders such as tinea cruris, tinea corporis (ringworm), tinea vityriasis visicolor (tinea versicolor), and tinea pedis (water fleas). The fishing community in the research area is close to swamps, dense and dense housing, also lacks personal hygiene. Many fishermen work with wet and damp clothes to dry when fishing at sea, from transporting ice, fuel oil and other equipment to the ship without replacing them, this results in people experiencing itching and suffering from dermatophytosis.

The population based on age in the fishing community in Meukek Subdistrict is slightly higher at the age of 26-45 years, which is 40%, this is because over 26 years of age the fishing community is married so that economic demands require them to go to sea. Meanwhile, the lowest number is at the age of 12-25, which is 26%, at the age of 12 years and over they only help their parents to earn money for their daily needs by washing fishing boats and helping the crew to reduce their fish response when they dock.

Although the economy that requires them to work, the education level of the fishing community has started to improve, at the high school and university education levels it is 60%. The fishing community in Meukek Subdistrict has started thinking about better education so that life changes, apart from that complaints of skin disease still exist, the fishing community who have complaints of unfavorable diseases is slightly more, namely 56%.

Research by Hermia (1983) in Jakarta shows that tinea cruris is mostly found in the 25-44 year age group, namely 31.6%, male patients 71.1%, and 78.9% low educated. This study also found a significant relationship between the incidence of tinea cruris and the frequency of changing clothes; The percentage of tinea cruris in subjects who changed clothes once a day was 0.14%, while in subjects who changed clothes twice a day it was only 0.01%.

According to data from the Health Office of South Aceh Regency in 2014, households that have a clean and healthy lifestyle (Ber-PHBS) are 26.9%, while only 15.22% of households that meet the requirements. This is because the fishing community still lacks personal hygiene and has many houses that do not meet health requirements. Based on the examination of a general practitioner at the Meukek Health Center, 56% of the people had dermatofytosis and 40% of the people who did not suffer from dermatofytosis.

Based on the results of research on fishing communities in Meukek District, South Aceh Regency, there is a relationship between cleanliness of clothes and the incidence of dermatofytosis. At the time of their research, the fishermen said that they rarely change their clothes when they go to sea, even sometimes they rarely wear clothes when they go to sea due to the hot sea temperature.

The fishing community in Meukek Subdistrict has done personal hygiene, but the implementation is still not good, such as bathing every day, bathing 2x a day, showering with soap, washing hair with shampoo and wearing clothes, keeping clothes clean and changing clothes after bathing, wearing toiletries and so on. other. this is because they work at sea from morning to evening and even a month. Time to work or go to sea if fishermen have to catch fish farther where it will take up time, then restrictions are made, namely for 5 (five) days at sea which is done at 12.00 noon they call the Mediterranean sea, for 1 (one) month at sea it is called the middle lane, while each day at sea that departs from morning (05.00) to evening (18.00) is called a fishing net, and for 9 (nine) days it is called the edge route. In observing the fishermen's time to return home, when they arrive at the fishermen's house, they wash and clean the boat or canoe using sea water. fishermen are directly related to water, starting from sorting the fish to washing the boat or canoe. According to interviews, residents who work as fishermen often experience skin complaints such as itching, bumps, red spots, because the work environment is always connected to sea water and the fishermen's personal hygiene has not been carried out.

The results of home measurements of respondents who did not meet the requirements with the incidence of dermatofytosis were mostly affected by dermatofytosis, namely 54.3%, the humidity that met the requirements also did not occur dermatofytosis, namely 40.0%. So that the results obtained there is no relationship between humidity and the incidence of dermatofytosis in fishing communities in Meukek District, South Aceh Regency.

The average humidity of the fishing community's house ranges from 70% -95%, the high humidity of the house in the fishing community in Meukek Subdistrict when measuring, so it does not meet the requirements according to the housing supervision indicator. Humidity of

air that meets health requirements in the house is 40-70% and humidity that does not meet health requirements is <40% or> 70%. (Gunawan, 2009)

Based on the literature, it is stated that a house that does not have moisture that meets health requirements will have an impact on its residents. A damp house is a good medium for the growth of microorganisms, these microorganisms can enter the body through the air. (Gould and Brooker, 2003). According to Putra (2008), skin disease caused by fungal disease or dermatomycosis is a disease that is often found in tropic countries which is caused by humid air which supports the development of fungal diseases. Humid and hot air throughout the year is very suitable for the development of fungal diseases. The prevalence of fungal diseases is higher in tropical areas. According to Peter (2005) and main (2004) factors that influence dermatophytosis are humid air, dense environment, low socioeconomic conditions, the presence of nearby sources of infection, obesity, systemic diseases, uncontrolled use of antibiotics, steroids, and cytostatics. Tinea cruris is common in areas with warm, humid climates, and predisposing factors include closed shoes and frequent exposure. Another study by Permatasari (2010) shows that air humidity has an effect on the incidence of dermatophytosis in the skin and venereal disease polyclinic of Dr. Corner of MS Wonogiri.

In this study, researchers used a digital measuring instrument that could measure two parameters, namely temperature and humidity, making it easier for researchers to make measurements. The average temperature of the respondent's house did not meet the requirements, which ranged from 30.20C - 31.60C. According to Suyono (2010), in general, the assessment of house temperature uses a room thermometer. Based on housing surveillance indicators, the house temperature especially the room temperature that meets health requirements is between 220C-30°C and those that do not meet the requirements are <220C or> 300C. The temperature in the house will have an impact on the occupants.

Temperature and humidity conditions can vary depending on the position and the sun's rays to the earth. So that the temperature and humidity at different hours show different numbers. Likewise, the average daily and monthly temperatures are not always the same number. The difference in temperature and humidity is not only affected by time, but is also not influenced by local geographical conditions. For example, coastal areas have different temperatures and humidity compared to mountainous areas (Daldjoeni, 1992). According to Budimulja (2010), dermatophytosis or ringworm infection includes diseases of the tissues that contain horny substances, for example the stratum corneum in the epidermis, hair and nails, which is caused by the dermatophyte fungi group. Dermatophytosis transmission in humans mostly comes from animals (zoophilic), humans (anthropophilic), and from soil (geophilic) to humans. The most isolated dermatophytosis species was *T. rubrum*.

The existence of dermatophytosis fungal colonies is the most important thing for the emergence of skin fungal diseases. Furthermore, the growth of the fungus depends on its predisposing factors, such as: high air temperature, high humidity, local skin pH, trauma, obesity, length of contact, genetics, and poor socio-economic environment (Siswati, 2001). Dermatophytosis is a disease of the tissue containing horny substances, such as the stratum corneum of the epidermis, hair and nails, which is caused by the dermatophyte fungi. The distribution, species causing, and forms of infection that occur vary in different geographic

areas, environments and cultures. Dermatophytes develop at 25-28 ° C, from the onset of infection in human skin supported by hot and humid conditions. For this reason, superficial fungal infections are relatively frequent in tropical countries, in populations of low socioeconomic status who live in congested environments and low hygiene (Havlickova, 2008).

Conclusion

Based on the results and discussion of the research described in the previous section, the following conclusions can be made. Based on a doctor's examination of the fishing community in Meukek District, South Aceh Regency, in 2016 the results were that 56% of the fishing community experienced dermatophytosis. There is a relationship between clothing hygiene and the incidence of dermatophytosis There was no significant relationship between humidity and the incidence of dermatophytosis

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