RELATIONSHIP BETWEEN GENETIC FACTORS, PARENTS' ROLE AND RECURRENCE OF ALLERGY IN CHILDREN AT THE JEMURSARI ISLAMIC HOSPITAL SURABAYA

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ABSTRACT

Introduction: Children with allergic diseases is increasing. Genetic factor and parents' role are important in dealing with allergies in children. The aim of the study is to determine the relationship between genetic factor, parents' role, and recurrence of allergy in children at Jemursari Islamic Hospital Surabaya. **Method :** The study design was analytic cross sectional. The population and sample were all mothers who had 1-5 years allergic children based on the sample criteria and used consecutive sampling. The independent variable was genetic factor, parent role, the dependent variable was recurrence of allergy. The instrument was questionnaires. Data analysis used chi-square test. **Result :** The result showed the majority (73,3%) had genetic alergic factor, (63.3 %) parents role was not good , the majority (56.7 %) of the children experienced a severe allergy recurrence. Fisher 's Exact Test $\rho = 0.242$ meant that $\rho \geq \alpha = 0.05$ means that H0 was acepted , there was't a relationship between genetic factor and allergic recurrence, Fisher 's Exact Test result showed that $\rho = 0.023$ meant that $\rho < \alpha = 0.05$ so H0 was rejected, there was a relationship between the parents' role and recurrence of allergies. **Discussion :** It concluded that alergic genetic factor would not affect to recurrence and less of parents' role made allergy recurrence get worse. Parents are expected to have the better role in order that the recurrence is rare.

Keywords : allergy ,genetic factor, parents role , allergy recurrence

INTRODUCTION

Allergy is a disease caused by genetic factors and environmental factors. Allergy is a typical form of the disease is the result of the interaction of a distorted body defense system because of genetic factors and environmental factors (Setiabudi and Hardywinito, 2003). Pollution of air, land and water that will give rise to various allergens or allergen substances are some examples of environmental factors that can affect the onset of allergies (Maharani Sabrina, 2008).

Children up to adults can be exposed to the disease. Allergies occur unexpectedly, came and went quickly, and may also occur or persist in quite a long time, so it can be said of this mysterious disease allergic (Graha, C.K. 2010). The signs and symptoms caused by allergic diseases at children it's like spotting a redness on the cheeks accompanied by flaking skin as well as skin scales. In addition, it can also happen to the symptoms of the cough that occurs repeatedly, it appears there is shortness of breath, an extra breath sounds (Setiabuhi and Hardywinoto, 2003).

About one in three babies born now have an increased risk of allergy (Graha, c. k., 2010). Toddlers also has the risk of allergy. Parents do not know that there will be impacts arising from allergic history parents at her child that is impacting to children develompment, harm the body, triggering the onset of complications of the disease, and can be life-threatening (Graha, c. K 2010). Some parents who have a child allergies often seen desperate because the disease often relapse and recurrence (Judarwanto, Widodo 2012). Based on data of the World Allergy Organization (WAO) number incidence of allergy in 2011 continued to increase by 30-40% of the population in the world.

According to the Center for Disease Control and Prevention (CDC) States that the occurrence of allergies increases to 3 fold that

counted since 1993 to 2006. In Indonesia, according to the newspaper, the sindo may 8th, 2013, estimates the number of occurrence of allergies achieve up to 30% per year.

Allergy is a typical form of the disease is the result of the interaction of a distorted body defense system because of genetic factors and environmental factors (Setiabudi and Hardywinito, 2003). Parents don't realize that this lineage or genetic factors can be the cause of the onset of the disease. Parents berpendapati lingkunganlah factors that can effect such as air. Older people who suffer from allergies can be passed down to his son, if there is a mutation in the genes of the child from his parents then allergy can occur or have allergies. This gene mutation is inevitable because it occurs when the conception of the child. The role of the parents can do to minimize the occurrence of allergies in children is by knowing the right information about handling against allergies. In addition, parents can play a role in maintaining the environment of such children, food, the environment, and the cleanliness of the House that greatly influences the incidence of allergies in children against (Graha, c. K 2010).

Allergies can not be removed, but can be minimised kekambuhannya. To minimize recurrence of allergy in the child, the role of parents is needed such as avoiding allergy factor. The ideal step is avoiding the originator can cause the allergy complaints. Knowing early on that the child affected by allergies allergy test way so early prevention can be done for those who already have a history of allergies.

Based on the description above, then the writer wanted to know the relationship between genetic factor, the role of a parent , with recurrence of allergy in children at Jemursari Islamic Hospital Surabaya .

RESEARCH METHODS

The design of the study was analytic with Cross Sectional approach. Population and sample was all mother and child allergies that are not undergoing immunotherapy and taken care of by the parents as well as experienced a recurrence of allergy who came to children's at Jemursari Islamic Hospital Surabaya 2015. The sampling technique is the consecutive sampling. variables independent are genetic factors and the role of parents Varaiabel dependent is a recurrence of allergy. Instrument in the research are: for variable genetic factors and recurrence using questionnaire and ensured with medical record data, the variable for the role of parents as guardian by using questionnaires sheet of 12 questions covered in the form of a check list. Data analysis using SPSS by chi Square test.

RESULTS

a. Characteristics of respondents based on genetic factors in family

No	Genetic factor	Frequency (f)	Percentage (%)
1	There	22	73,3
2	are	8	26,7
	None		
	Total	30	100

b. Characteristics of the respondent based on the role of parents.

No	Role of parent	Frequency (f)	Percentage (%)
1	Good	11	36,7
2	role	19	63,3
	Less role		
	Total	30	100

c. Characteristics of the respondents based on recurrence of allergy.

No	Relapse	Frequency(f)	Percentage(%)
1	Mild relapse	13	43,3
2	Severe relapse	17	56,7
	Jumlah	30	100

d. Cross-Tabulations genetic factors with recurrence of allergy

No	Genetic factor	Recurrence of allergy				Jumlah	
		Mild relapse		Severe relapse			
		N	%	N	%	N	%
1	There is	8	26,7	14	73,3	22	100
2	None	5	73,7	3	26,3	8	100
	Jumlah	13	40,0	17	60,0	30	100
	Fisher's Exact Test $\rho = 0{,}242$						

Fisher's Exact Test in test get $\rho = 0.242$ means $\alpha = 0.05 \geq \rho$, that means there is not a relationship between genetic factors with

recurrence of allergy in chidren at Jemursari Islamic Hospital Surabaya .

e. Cross-Tabulate the role of parents with recurrence of allergy

No	Role of Parent	Kekambuhan Alergi				Jumlah	
		Mild relapse		Severe relapse			
		N	%	N	%	N	%
1	Good role	8	72,7	3	26,3	11	100
2	Less role	5	26,3	14	73,7	19	100
	Jumlah	13	40,0	17	60,0	30	100
Fisher's Exact Test ρ = 0,037							

Fisher's Exact Test in test get ρ = 0.023 means α = 0.05 < ρ, that means there is a connection between the role of a parent with recurrence of allergy in children at Jemursari Islamic Hospital Surabaya .

DISCUSSION

1. Genetic factors

The above results suggest that the occurrence of genetic factors or history of allergy in children most 22 (73,3%) due to inheritance of family allergy history especially from parents.

The results of the above research supported by research suggesting that families that show allergy symptoms obtained data that when both parents suffer from allergies then chances are its descendants will inherit the allergy to 75%. But if only one of the parents who suffer from allergies, found that only 50% of the offspring will suffer allergies (Setiabudi dan Hardywinito, 2003).

It is also supported by Purnomo (2008) that a family history of effect on the incidence and recurrence of a disease.

Supported also by research Dold, dkk 3 stated that atopy parents determine the magnitude of the risk of her child to suffer the same allergic diseases. Researchers also mention that the prevalence of asthma in children who do not have a history of allergies in both parents amounted to 6%, whereas in children who have a history of allergies in both his parents obtained an increase more than doubled or amounting to 16%. Cohort study shows that when one of your parents have allergies, chances are his son to suffer allergies by 33%. When both parents have allergies, chances are his son to suffer allergies of 70% .4

2. The role of the Parents

Based on the results above, most of the parents of 19 (63.3%) have a less role. The less role of parents supported by (63,4%) parents stated does not agree to understand the correct factor – what are the factors that can cause allergy at anakny, a parent does not agree to protect his son from the recurrence of allergy by way of avoid the cause, disagree do the observations made a day today against all the things that can affect the recurrence of Allergy and parents also do not agree do an allergy test. Most of the parents (56.7%) opinion that did not agree to postpone the awarding of some foods cause allergies such as chicken, fish, and eggs, and also replace the formula with soya and also did not agree to avoid precipitating factors because they assumed that the allergy occurs in children disappears as you get on with the child. Parents assume that the older the age of her child, then the child's body on durability will also be getting better. So the recurrence of allergy in children will also be increasingly rare. Theoretically, allergies indeed could not be eliminated, but it can be dijarangkan kekambuhannya frequency Therefore, parents must provide the handling of allergies in children appropriately.

The role of less well above contradict opinions according to Chairinnisa K Graha (2010), parents are very important to help tackle the problem of allergies in children, not only call the doctor, but also need the right knowledge and information in dealing with the problem of allergies children his life day by day.

3. Recurrence of allergy

Children mostly 17 (56.7%) have severe relapse. Children 53,3% experience a recurrence of allergy with frequency ≥ 1 x/month. Average 2 x/month relapse. most recurrences four times per month

According to Setyanto, 2014 children exposed allergies once a month or once month two times it is unnatural and can endanger the life of a child at a later date.

Second, majority 53,3% children who come to the children's hospital was having a recurrence of allergy by showing symptoms that are more severe than visits before. children suffering from allergies will exhibit early symptoms diarrhea, then the child will come back to hospital with severe relapse like bloody diarrhea, so that these children will need further treatment in hospitals. In addition to diarrhea, usually also showed symptoms of cough and influenza

4. The relationship between genetic factors With Recurrence of allergies .

Chi Square analysis obtained ρ = 0.242 α = ρ mean < 0.05. This means that there is no relationship between the history of allergy to the degree of recurrence of allergy in children. Parent who have allergies in theory also lowered the genetic allergy on her children but does not affect the rate of recurrence. The results of this study in accordance with research of Purnomo (2008) stating that a history of asthma have a meaningful relationship with p value = 0,015. Has been widely proven by many researchers that when both parents suffer from allergic diseases, t 60% of her childeren will suffer from allergic diseases, Asthma, rhinitis, both dermatits atopy or other allergies. This means that there are other factors that cause recurrence in accordance with the results of the research Syaiful, 2012 about allergic disease Association with genetic and environmental factors. Based on the results of this research found data that house dust (p value = 0,018), genetic (p value = 0.042), order of birth first/eldest son (p value = 0.232; Or potentially 4.55) to experience the clinical manifestations of asthma. So, it can be concluded that there are a lot of factors precipitating causes of recurrence of asthma, not only genetic but can also be obtained from the environment inside and outside the House.

5. The relationship between the role of a parent with Allergies in children of recurrence

The results of the Fisher's Exact ρ = 0.023 mean α = 0.05 <., meaning that there is a connection between the role of a parent with allergies in children of recurrence. 19 parents who have less role mostly 14 (73,3%) his children suffered a recurrence of severe allergies.

The better the role of parents as the protector in avoiding the allergen also increasingly lighter incident recurrence of allergy that plagued her children. This is in accordance with the opinion of the Chairinnisa K Graha (2010) which revealed that parents are instrumental to help tackle the problem of allergies in children. A pretty dangerous complications can arise if the allergy is not handled properly. A trivial oversight from parents regarding allergies, turned out to be long-duration can also interfere children development e , harm the body, triggering the onset of complications of the disease, and can be life-threatening. Therefore it is highly recommended on the parents to do the Allergy prevention as early as possible to reduce the impact on the lives of the children at a later date.

However, handling is too loose or excessively on allergies is also not good. If it is too loose, the children will continue to suffer from various disorders. Likewise sebaliknyaa, handling allergy overload will limit food consumption so that the child can interfere with the growing important role. Avoid foods or the originator of the allergy by right and not dabble is the only way a parent can do to overcome the allergies in children. Some parents deliberately giving food allergy Starter to his son with the hope that the body of the child the more lenient and not allergic anymore. This way can backfire for the child because of allergies that could trigger dangerous (Permanasari, Indira 2014).

Munazir (2011), says parents have an important role in Allergy prevention efforts as early as possible in order to reduce the impact on the impact on children's lives in the future. Signs and symptoms of allergy's own and in whatever form constitutes the beginning of the disease, thus preventing allergies as early as possible to prevent future allergic disorders

(Judarwanto, Widodo 2012). Support from parents is very needed when children experience a recurrence of allergy. Parents should be able to menyikapinya well. Parents should just be assertive to prohibition of food or other things that can trigger a recurrence of allergy. However, children should not be made the object of anger when a child violates the restrictions. Scold a child when alerginya relapse makes children feel depressed and triggers the onset of depression. Therefore the role of the parents determine the durability and stability of the emotions his son (Hanimah, Fatimah 2013)

CONCLUSION AND RECOMENDATION

Children at pediatrics Islamic hospital Surabaya most have allergy genetic factors in his family, the children experienced a severe allergy recurrence twice per month ,

alergic genetic factor would not affect to recurrence and less of parents' role made allergy recurrence get worse. Parents are expected to have the better role in order that the recurrence is rare

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