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Research Article

Epidemiology study of leprosy patients in the district of Bombana Southeast Sulawesi Province, Indonesia

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ABSTRACT

Background: Leprosy remains a public health problem in Bombana. In 2011 cases of leprosy were recorded for 34 cases or 2.4 per 10.000 population. In January 2012, the number of patients with infectious diseases is increased to 53 cases.
Methods: The method used is a survey method with cross sectional approach, with a total sample of 34 people. The epidemiological characteristics of respondents surveyed consisted of the characteristics (gender, knowledge, and personal hygiene), the characteristics of the place (population density), and the characteristic time diagnosed (months).
Results: The results showed that the characteristics of lepers many male sex (55.9%), elementary education (58.8%), had less knowledge about the disease (76.5%), did not work (52.9%), personal hygiene enough (85.3%), residential density has not qualified (88.2%) and most likely to be diagnosed in the period January to March (41.2%).
Conclusion: The incidence of leprosy in Bombana is still very high and therefore required a treatment in patients on a regular basis and it takes effort to prevent the spread of the disease that can be restricted.

Keywords: Epidemiology, Leprosy

INTRODUCTION

Leprosy is endemic in tropical countries, especially in underdeveloped or developing countries.[1] The prevalence of leprosy in the world at the beginning of 2007 was 224 717 people (3.3 per 100.000 population), and of these the most numerous in the Southeast Asian region 116 663 people (21.4 per 100.000 population) followed with 64 715 people regionally (7.7 per 100.000 population), African regional 29 548 people (3.6 per 100.000 population), and the Western Pacific region 9805 people (0.5 per 100.000 population).[2]

In 2009, the World Health Organization Indonesia ranks third set number of people with leprosy in the world after India (127295 or 10.9 per 100.000 population) and Brazil (33955 or 17 per 100.000 population) as many as 17260 cases (7.49 per 100.000 population). In the ASEAN region, Indonesia occupied the top spot. Myanmar is second with 3082 cases (7.2 per 100.000 population) and the Philippines ranked third as many as 2,936 cases (3 per 100.000 population). Two neighboring Indonesia, which Malaysia has only 216 cases (0.8 per 100.000 population) and Singapore 11 cases (0.2 per 100.000 population). World Health Organization (WHO) declared in 2010 there were 17 012 cases of leprosy (7.1 per 100.000 population) in Indonesia and in 2011 lepers in Indonesia reached 20023 cases (8.3 per 100.000 population) and continued to increase in the years 2012 is registered as

many as 23169 people affected by leprosy cases (9.7 per 100.000 population).[2]

In Southeast Sulawesi province, the number of new cases of leprosy in 2009 was 249 cases (1.11 per 10.000 population).[3] In 2010, the number of new cases of leprosy in Southeast Sulawesi ranks 16 out of 33 provinces in Indonesia, which amounted to 254 cases or 1.13 per 10.000 population.[3]

In Bombana, leprosy is still a public health problem, where in 2011 cases of leprosy were recorded for 34 cases (2.4 per 10.000 population). In January 2012, the number of patients with infectious diseases is increased to 53 cases (3.8 per 10.000 resident) or reached 80% in 2012 and was ranked 4th out of 12 districts/cities in Southeast Sulawesi (Southeast Sulawesi Health Office, 2013).[4] The purpose of this study is to describe the epidemiology of leprosy patients in the region Bombana.

METHODS

This type of research is a survey method with descriptive approach is to describe the epidemiology of leprosy patients in the Bombana. With the overall sample size in this study was 34 lepers.

RESULTS

The results of this study the authors describe in the following form epidemiological overview. Characteristics gender, knowledge, work, and personal hygiene respondents leper.

Table 1: Distribution of respondents by gender, knowledge, work, and personal hygiene Bombana in Southeast Sulawesi Province.

	N	%
Sex		
Male	19	55.9
Female	15	44.1
Total	34	100
Knowledge		
Enough	8	23.5
Less	26	76.5
Total	34	100
Personal hygiene		
Enough	29	85.3
Less	5	14.7
Total	34	100

Based on the gender distribution in Table 1 shows that the number of lepers at most male sex is 19 people or 55.9%, while women are 15 people or 44.1%. Respondents, who have less knowledge as many as 26 people (76.5%), while respondents who have sufficient knowledge of as many as 8 people. respondents who do not work as many as 18 people (52.9%), while respondents who worked as many as 16 people (47.1%). Respondents, who have sufficient personal hygiene as much as 29 people (85.3%), while respondents who have poor personal hygiene as many as 5 people (14.7%).

Residential density characteristics, diagnosis time leper in Bombana.

Table 2: Distribution of respondents according to the density of occupancy, time of diagnosis in Bombana Southeast Sulawesi Province.

	N	%
Density occupancy		
Qualify	4	11.8
Non qualify	30	88.2
Total	34	100
Time diagnosed period		
January-March	14	41.2
April-June	4	11.8
July-September	4	11.8
October-December	12	35.2
Total	34	100

Table 2 shows that of the 34 respondents, 30 men (88.2%) who had not eligible dwelling, and there are 4 people (11.8%) who had qualified occupancy. Distribution of respondents enrolled at most in the period January to March 2012 with 14 leprosy patients (41.2%). While the distribution of respondents enrolled at least that is the period from April to June and July to September respectively amounted to 4 people (11.8%).

DISCUSSION

Characteristics of gender and its relationship with the nature of the exposure and the degree of vulnerability of its own role. Therefore, where there is the presence of the frequency of the disease according to gender, it must be analyzed if differences arise because of differences in the ratio, sex in the population or whether due to differences in customs factors, biological factors as well as genetic factors.[5]

The high morbidity and mortality among men thought to be caused by some hereditary factors associated with sex or differences in environmental factors where more men are smoking cigarettes, drinking, heavy work, dealing with hazardous work and others, the causes of the existence of a higher morbidity rate among women in the United States associated with the likelihood that more women are free to seek treatment.[6] From the results of previous studies that characteristics of lepers many male sex (55.9%). Cases of leprosy in Bombana are still very high compared with the case of the world. Elimination of leprosy was defined as a bargain of infection prevalence to <1 case per 10.000 population.

Research results in Table 4 show that the education of lepers in Bombana is low. Only 6 people (17.6%) who had a junior high education level, and even then not resumed until today. Most of them have only primary school education of 20 persons (58.8%). In fact, some are not in school are 8 people (23.6%). Low education in leprosy patients in Bombana cause a lack of awareness of them to check their illness so they delayed diagnosis. As a result, the longer they are more contagious to those around him.

Education levels in Bombana from time to time is increasing, but in areas far from the city, the level of education is still much lower. There are still many people who do not go to school. Economic factors and the lack of awareness of the importance of education of rural communities to be one important cause of the problem.[7] Adequate education will have a positive impact on the prevention of cases of leprosy.[8]

The results showed that respondents who have less knowledge as many as 26 people (76.5%), while respondents who have sufficient knowledge of 8 people (23.5%). On average respondents were unable to answer questions correctly about the characteristics / symptoms, causes, modes of transmission, and prevention of leprosy. It is influenced by the level of education and insight that less of the respondents. Low education levels are affected by the lack of income respondents. Under certain conditions less education also will give a negative view of the lepers.[9] Their monthly income is just enough to meet the needs of their everyday lives, so they are not able to pursue higher education.

Another assumption that is still going on in the community who are less experienced about leprosy due to the lack of information on the prevention and control of leprosy is good and right on the part of health care. But on the other hand are occasionally indifferent towards counseling and routine administration of drugs by health workers.

People in Bombana most think that leprosy is not a contagious disease. Most of them are also there who do not want to take medication because he considered himself only common skin diseases due to allergy after eating certain foods. Lack of information about the disease that is accepted by society through the media, which is one way communication, as well as through counseling is still lacking. Health workers provide information about the disease only to someone who has been registered as a patient, while the general public does not obtain such information, so that the business community to take action to prevent leprosy is still very low, especially in the activities of keeping the environment that can prevent the emergence of leprosy.

Personal hygiene is an act to maintain the cleanliness and health of a person's physical and psychological well-being. Conversely, lack of self-care is a condition where a person is unable to perform hygiene care for himself. Surrounding environment also affects the degree of a person's health as a storage area or closet clothes, bedding, tools, bath and so on. Personal hygiene if not supported by the cleanliness of the surrounding environment will still potentially transmit disease.[10] Therefore, personal hygiene environment can be done by cleaning the closet, hanging mattress or bed, pay attention to the cleanliness of bathing equipment, and so on.[11]

The place is an area that can be categorized as a specific area of a region such as the village, sub-district, district and others. The relationship between disease with a show the factors that has significance as a cause of disease that is related to the location of residence of the patient.[12] Another study conducted relationship with the incidence of leprosy home characteristics at Public Health Centre District of Pemalang Regency Park residential density values obtained for OR=1.129.[13] The relationship between time and the disease is a basic requirement in the analysis epidemiology.[14] Because changes according to the time of disease showed a good etiologic factor changes in a short time, periodic and secular.

The morbidity report will be very important in epidemiology because is based on real events and not based on an estimate or estimates. In addition, the recording and reporting of morbidity may be known of changes in the incidence and prevalence of disease until the results can be used for planning and managing health problems. The strategy used for disease control by the Coordination for leprosy and Diseases under Elimination of the Health Surveillance Secretariat of the Ministry of Health consists in early detection and prompt treatment of cases to eliminate the sources of infection and prevent squealed. Integrated services and partnerships support the actions for disease control.[15] Surveillance to achieve early detection of hanseniasis, to prevent potential squealed and that public health programs in the most affected areas should be rein forced.[16] The government should conduct routine in preventing the spread of leprosy.[17]

CONCLUSIONS

Distribution of leprosy in Bombana still quite high, prevention is one of the measures to reduce the spread of the disease. Besides the treatment of leprosy patients should also be a very serious concern. Local governments should actively implement the approach to the public of the importance of healthy living.

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REFERENCES

1. Kumar A, Girdhar A, Chakma JK, Girdhar BK. WHO multidrug therapy for leprosy: epidemiology

of default in treatment in Agra district, Uttar Pradesh, India. BioMed Res Int. 2015;2015:705804.
2. Indonesia MOHR. Handbook for national leprosy eradication. In: MOHR, eds. A Book. Jakarta: MOHR; 2012.
3. Sulawesi PhoS. Health report Southeast Sulawesi. In: Sulawesi PhoS, eds. A Report. Kendari: Sulawesi Publication; 2011.
4. Bombana PHo. Reports health service data Bombana of leprosy. In: Bombana Pho, eds. A Report. Bombana: Bombana Publication; 2010.
5. Weng X, Heiden JV, Xing Y, Liu J, Vissa V. Transmission of leprosy in Qiubei County, Yunnan, China: insights from an 8-year molecular epidemiology investigation. Infect Genet Evol. 2011;11(2):363-74.
6. Moschella SL. An update on the diagnosis and treatment of leprosy. J Am Acad Dermatol. 2004;51(3):417-26.
7. Basel P, Pahan D, Moet FJ, Oskam L, Richardus JH. Leprosy incidence: six years follow-up of a population cohort in Bangladesh. Leprosy Rev. 2014 Sep;85(3):158-69.
8. Seshadri D, Khaitan BK, Khanna N, Sagar R. The tangled web: a study of knowledge and attitude towards leprosy from a tertiary care hospital in India. Indian J Leprosy. 2014 Apr-Jun;86(2):27-41.
9. Cordeiro TL, Cipriani Frade MA. Leprosy: education as first priority. J Neurosci Rural Pract. 2014 Nov;5(Suppl 1):S3-4.
10. Sri Hari N. Personal hygiene and environmental sanitation in leprosy infection. Leprosy India. 1978 Jul;50(3):396-9.
11. Dharmendra. Control and eradication of leprosy. Indian J Leprosy. 1986 Apr-Jun;58(2):175-84.
12. Staples J. Communities of the afflicted: constituting leprosy through place in South India. Med Anthropol. 2014;33(1):6-20.
13. Amiruddin. Leprosy in Indonesia, handling problems. In: Amiruddin, eds. A Report. Jakarta: Jakarta Publication; 2012.
14. Santos VS, Mendonca-Neto PT, Fakhouri R, Raposo OF, Reiss FP, Feitosa VL. Epidemiological and histopathological study of leprosy cases in the state of Sergipe, Brazil. Indian J Leprosy. 2013 Jul-Sep;85(3):93-100.
15. Lastória JC, Abreu MAMMd. Leprosy: review of the epidemiological, clinical, and etiopathogenic aspects - Part 1. Anais Brasileiros de Dermatologia. 2014;89:205-18.
16. Moreira SC, Batos CJdC, Tawil L. Epidemiological situation of leprosy in Salvador from 2001 to 2009. Anais Brasileiros de Dermatologia. 2014 Jan-Feb;89(1):107-17.
17. Cross H. The prevention of leprosy related disability as an integral component of the government health delivery programme in Indonesia: perspectives on implementation. Leprosy Rev. 2013 Sep;84(3):219-28.

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