

A Finding Analysis of Tuberculosis Suspect Case In Community

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Abstract— Tuberculosis (TB) is one of the problems that still the leading cause of death in the world, including Indonesia as developing country. The purpose of study is to analyze the case finding of suspect tuberculosis in the community. The study was conducted in 4 villages in the district of Bandar Petalangan, Pelalawan with 148 samples by purposive sampling method. The Data is collected by questionnaire in checklists form. Univariate and bivariate (chi square) were used in data analyse. The results showed that 8.7% of respondents as suspected Tuberculosis, 0.5% of respondents' neighbours are Tuberculosis patients, 63% respondents are adults and the elderly, 53.3% were male, and 60.3% respondents did not work (students and housewives). There are the relationship between age and incidence of suspected tuberculosis (p value=0.008). Tuberculosis case finding activities in order to eradicate Tuberculosis program can do the best. Case finding of Tuberculosis suspect can be done in the community through the empowerment of health workers and families until tuberculosis disease transmission can be reduced.

Keywords—case finding; suspect; tuberculosis; analysis; community

I. INTRODUCTION

Tuberculosis (TB) is an infectious disease that usually attacks the lungs but can attack anypart of the body. It is caused by Mycobacterium Tuberculosis. Transmission of tuberculosis by inhalation of droplet nuclei produced when a person with infectious pulmonary orlaryngeal tuberculosis coughs, laughs, sneezes, sings, or talks. If another person breathesin these droplet nuclei, there is a chance may become infected with tuberculosis [1]. People nearby may breathe in these bacteria and become infected. If not treated properly, Tuberculosis disease can be fatal (death).

The World Health Organization (WHO) Global Tuberculosis Report 2012[2] provides the latest information and analysis about the tuberculosis epidemic and progress in TB care and control at global, regional and country levels. It is based primarily on data reported by WHO's Member States in annual rounds of global TB data collection. In 2012, 182 Member States and a total of 204 countries and territories that collectively have more than 99% of the world's TB cases reported data [2].

Tuberculosis is one of the problems that still the leading cause of death in the world, especially in developing countries. Until now, there has been no single country that managed to free from Mycobacterium tuberculosis. Based on the WHO

report Global Tuberculosis Control (2012), Indonesia ranks fifth from 22 high burden countries of Tuberculosis, with 429 730 Tuberculosis patients and 183 366 new cases [3].

People with Tuberculosis disease are most likely to spread it to people they spend time with every day. This includes family members, friends, and co-workers or schoolmates. However, not everyone infected with Tuberculosis bacteria becomes sick. People infected, but not sick, have what is called latent Tuberculosis infection. People who have latent Tuberculosis infection do not feel sick, do not have any symptoms, and cannot spread Tuberculosis to others. But some people with latent Tuberculosis infection go on to get Tuberculosis disease [3].

Many people who have latent Tuberculosis infection never develop Tuberculosis disease. In these people, the Tuberculosis bacteria remain inactive for a lifetime without causing disease. But in other people, especially people who have weak immune systems, the bacteria become active, multiply, and cause Tuberculosis disease. A person exposed to Tuberculosis disease is influenced by several factors such as socioeconomic status, nutritional status, age, sex, and toxic factors. Babies and young children often have weak immune systems.

There are two types of Tuberculosis infection, latent or active. Latent infection is when you may have no signs of Tuberculosis. The bacteria are in your body, but they are not active. Active Tuberculosis is when people have signs of the bacteria, such as cough that lasts more than 3 weeks or won't go away, fever, weight loss or loss of appetite, feeling weak and tired, chest pain, night sweats. The main symptoms of Tuberculosis patient is coughing with sputum for 2-3 weeks or more. These symptoms can be found also in lung diseases other. Because of the prevalence of Tuberculosis in Indonesia is still high, so every person who has the symptoms are considered as a suspect (suspected) Tuberculosis patients, and the need to direct microscopic examination of sputum. Therefore Tuberculosis case finding activities in the community is an important activity to do.

Case finding activities consisted of finding suspected patients, diagnosis, disease classification and determination of the type of patient. The finding patient is the first step in the Tuberculosis control program activities. The finding cases and cure of infectious Tuberculosis patients will be able to

significantly reduce morbidity and mortality due to Tuberculosis, decrease Tuberculosis transmission in the community and it is effective a Tuberculosis infection prevention activities in the community. To reach the Millennium Development Goal of reversing the incidence of tuberculosis and the Stop Tuberculosis Partnership targets for 2015 of reducing mortality and prevalence rates by 50 percent, it will be necessary to nearly double the detection of Tuberculosis cases. According to data the health profile of Riau Province detection rate of new cases of Tuberculosis cases in 2009 reached 2880 cases [4].

There are a lot of people providing low attention to the Tuberculosis problem because they do not know about Tuberculosis. The preliminary studies have been done in August 2013 to 20 health cadres in the district of Bandar Petalangan, Pelalawan. Interview results showed that health cadres not clear about tuberculosis and tuberculosis risk factors. The health cadres said that the public has not been known Tuberculosis including the symptoms and signs of Tuberculosis and they do not know how transmission of Tuberculosis disease. This condition will certainly increase the risk of Tuberculosis disease transmission in the community. The finding of suspected cases of tuberculosis in the community needs to be done through finding suspected Tuberculosis patients. The purpose of this study is to analyse the finding of suspected tuberculosis cases in the community.

II. RESEACH METHOD

This study is a correlation descriptive study with cross sectional design. This study carried out on 148 samples in 4 villages in the Bandar Petalangan district, Pelalawan. Samples were taken using a random sampling method in accordance with the inclusion criteria. Data collection tool used was a questionnaire in the form of checklists. The question includes the general data and signs and symptoms of tuberculosis. Family members will be checklist in the space provided in accordance with the signs and symptoms experienced. Data collection tool not tested the validity and reliability because it was taken from the theory that is standard. The analysis used is univariate (frequency distributions) and bivariate (chi square).

III. RESULT AND DISCUSSION

TABLE I. THE DISTRIBUTION FREQUENCY OF RESPONDENT

No	Data Respondent	Total	Percentage (%)
1	Tuberculosis Suspect		
	•No	168	91.3
	•Yes	16	8.7
2	Neighbor with Tubeculosis	183	99.5
	•No	1	0.5
	•Yes		
3	Age		
	•Children	68	37
	•Adult	116	63
4	Sex		
	•Women	86	46.7
	•Man	98	53.3
5	Occupation		
	•Yes	73	39.7
	•No	111	60.3
	Total	148	100

Table 1 shows that the most respondents were healthy. But, there were 16 respondents (8.7%) found as suspected Tuberculosis because it has a coughs with mucous symptoms more than 2 weeks and weight loss. In Table 1, found 1 neighbour respondent (0.5%) who was a Tuberculosis patient. Case finding of Tuberculosis strategy is done passively with the active promotion. The case finding of Tuberculosis suspect is doing in health care center which is supported by active health promotion by health workers and community to improve the case finding of Tuberculosis suspected patients target. Although the active case finding from home to home not considered because not cost effective but case finding in community activities is important because it can help the health workers in tuberculosis cases finding, the diagnosis and treatment of tuberculosis.

The case finding of the patient is the first step in the Tuberculosis control program activities. Case finding and cure of infectious Tuberculosis patients will be able to significantly reduce morbidity and mortality due to Tuberculosis, Tuberculosis transmission in the community and to realize Tuberculosis infection prevention activities are most effective in the community. 1 neighbour respondent in this study is the risk of transmission to the surrounding people. If someone has been exposed to the bacteria that cause tuberculosis would be bad as it decreases the productivity of labour or work, spread to others, especially to families who lives at home, and can cause death. This is because the transmission of tuberculosis disease is through saliva or sputum containing bacilli patients with tuberculosis. When the tuberculosis patient was coughing, the particles of saliva was floating in the air and inhaled by healthy people into his lungs which then makes someone to be tuberculosis disease [5].

Based on Table 1 also, the result that the majority of respondents (63%) were adults and elderly, 53.3% were male,

and 60.3% respondent did not work (students and housewives). The Results of chi square analysis found an association between age and the incidence of tuberculosis suspects (p value = 0.008) with OR = 9.9. Age can be a factor that can lead to a person at risk of tuberculosis. Tuberculosis disease most commonly found in young age or childbearing age (15-50) years. The life expectancy of the elderly is higher recently, it makes person's immunological system decreases in age of more than 55 years. The elderly is susceptible to various diseases, including Tuberculosis disease [5]. People infected with HIV, the virus that causes AIDS, have very weak immune systems. Other people can have weak immune systems, too, especially people with any of these conditions for examples diabetes mellitus and low body weight [6]. Based on the report of the Sub Directorate Tuberculosis, the Ministry of Health, Republic of Indonesia in 2006, which states that most tuberculosis infections sustained by people who are in the productive age (15-55 years) [7]. Data released by the Ministry of Health, Republic of Indonesia (2001) also showed that 75% of patients with tuberculosis are in the productive age group (15-50 years) with a low socioeconomic level [8].

The age has no effect to Tuberculosis disease. The body can fight off the infection only if satisfied by food nutritionally adequate amounts. It is not only depend on ages but enough nutrition. Malnutrition and reduced endurance can increase the severity of disease and increased mortality [9]. However that does not mean the children are not at risk of the occurrence of Tuberculosis. Tuberculosis is a serious disease, especially in infants and children. Tuberculosis disease is very risky on infants and children because the children have a low immune system. Infants and children increased the risk factor when the children are malnutrition and with immunological disorders.

The results of further analysis using chi square was found that no effect between work and sex with suspected Tuberculosis incidence (p value = 0.05). Sensitivity for tuberculosis are all disease-infected population, there was no difference between men and women, young and old, infants and toddlers. Highest sensitivity in children lack than three-year low at the end of the 12-13 year-old children, and may rise again in early adolescence and old age.

Tuberculosis disease trends to be higher in male gender compared women. According to WHO, at least in the period of a year there are approximately 1 million women who died because tuberculosis, it can be concluded that the more women a lot of death caused by tuberculosis compared with due process pregnancy and childbirth. Whereas in the male, the Tuberculosis disease is higher because of smoking tobacco and drinking alcohol may decrease defense system body, so it is more easily exposed with tuberculosis causing agent.

IV. CONCLUSION

Based on the results of this study found 8.7% of respondents as suspected Tuberculosis and 0.5% of respondents have a neighbor who Tuberculosis patient. The results this study indicate the relationship between the factors of age with suspected tuberculosis incidence (p value = 0.008). Tuberculosis is an infectious disease. The activities case finding of Tuberculosis through activities case finding of suspected Tuberculosis is an effort in order to eradicate Tuberculosis program can run well. Networking in the community can be done in the community through the empowerment of health cadres and families in order to reduce tuberculosis disease transmission.

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