Prevalence Study Of Pulmonary Tuberculosis in Umbulharjo Sub-Distric Yogyakarta 2014-2016

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A B S T R A C T

Background: Pulmonary tuberculosis is infectious disease coused by Mycobacterium tuberculosis. Most of Mycobacterium tuberculosis attacks lungs, but it can also attack other body organs (Depkes RI, 2007). Tuberculosis remains one of the deadliest diseases in the world. The World Health Organization (WHO) estimates that each year more than 8 million new cases of tuberculosis occur and approximately 3 million persons die from the disease. The result of Riskesdas in 2007, prevalence of pulmonary tuberculosis increases with age and highest prevalence is over 65 years. The prevalence of pulmonary tuberculosis in men is 20 % higher than woman. Prevalence of pulmonary tuberculosis is three times higher in low education compared to higher education (Riskesdas, 2007).

Methodology: This type of study was quantitative descriptive research. Respondents were tuberculosis program holders at Health Primary Care of Umbulharjo 1 and Health Primary Care of Umbulharjo 2. This reseach used tuberculosis register in Health Primary Care of Umbulharjo 1 and Health Primary Care of Umbulharjo 2. Data analysis was performed by descriptive. Data analysis used frequency distribution analysis.

Result: Suspected tuberculosis has increased from 2014 to 2016 in Umbulharjo District. Percentage of tuberculosis patients among the suspects in 2014 was 26.1%. Percentage of TB patients among the suspects in 2015 was 22.3%. Percentage of TB patients among the suspects in 2016 was 25.1%. the result of study found pulmonary tuberculosis primer, pulmonary tuberculosis secondary, extrapulmonary tuberculosis, and tuberculosis in children. Treatment success rates reached 89% in 2014, 92% in 2015, and 78% in 2016.

Conclusion: Cases of pulmonary tuberculosis fluctuate every year. Increased in 2016, which was 46 cases, compared to the year 2015 as many as 26 cases and in 2014 as many as 28 cases.

Kata kunci: Pulmonary Tuberculosis; Tuberculosis; Prevalence of Tuberculosis

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1. INTRODUCTION

Pulmonary Tuberculosis is a direct infectious disease caused by Mycobacterium tuberculosis, most of Mycobacterium tuberculosis attacks lungs, but it can also attacks other body organs[1] (Werrel, 2004; Depkes, 2011). Pulmonary Tuberculosis is infectious disease which is still observed in the world, because recently, no one state exempted from Pulmonary Tuberculosis of the death rate of Pulmonary Tuberculosis in the world is 1, 7 million. The sickness rate of Pulmonary Tuberculosis in the world is 9.4 million cases and one-third is productive age (15-55 years old)[2].

Pulmonary Tuberculosis is the most prevalent infectious disease over the world, with average a third infected population and 2.5 million death rate every year[3]. The bacteria causes the Pulmonary Tuberculosis discovered by Robert Koch in 1882[4]. The disease caused by this bacteria brings on deformity and mortality in over the world[5].

According to WHO 2013 estimated there are 8.6 million cases of Tuberculosis in 2012, where 1.1 million people (12%) of them are positively HIV ailer. About 75% of the patients live in Africa. In 2012, estimated there are 450 million people suffering TB MDR and 170 million of them die. The prevalence rate of TB in Indonesia in 1990 is 443 per 100.000 residents. Based on data Global Tuberculosis Control year 2009 (the data year 2007), the prevalence rate of Pulmonary TB in Indonesia is 244 per 100.000 residents or about 528.063 cases, the incidence rate of BTA positive Pulmonary TB is 102 per 100.000 residents or about 26.029 cases, while the death rate of Pulmonary TB was 39 per 100.000 residents or about 250 people a day[6].

Prevalence rate of TB BTA (+) in Yogyakarta regency year 2014 increase went down comparing year 2013, from 59.77 per 100.000 residents in 2013 to 59.77 per 100.000residents in 2013 to 53.39 per 100.000 residents in 2014. The discovering this new case of TB BTA (+) in 2013 was 243 cases and in 2015 was 23 cases in Umbulharjo I. The incidence rate in 2016 increases to 44 cases. The noted case includes new TB BTA (+) case. The new TB BTA (+) case needs to be cautioned because of infection source of TB bacteria (Depkes, 2011).

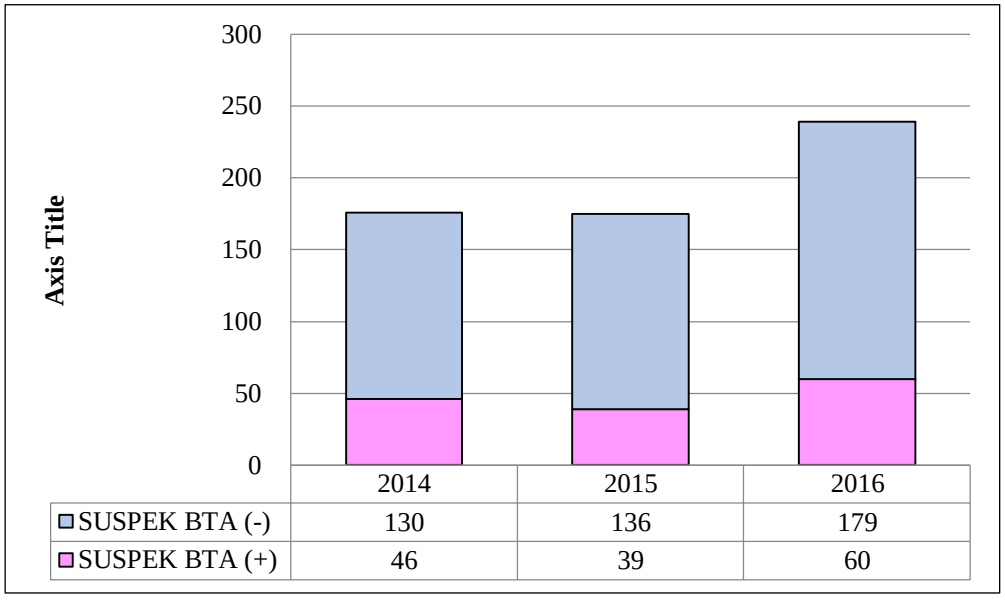
Prevalence of TB is still tending too much, especially in developing country. Prevalence of infectious global of TB is 32% (1.86 billion people). Eighty percent from all cases of TB discovered in 22 countries, including Southeast Asia. Confections prevalence is still high in over the world, about 0.18%[8].

2. MATERIALS AND RESEARCH METHOD

This research method applies qualitative and quantitative descriptive methods. The quantitative descriptive approach is the data found out from research population sample than analyzed appropriate to statistic method used and then interpreted through descriptive data. This research applied in Umbulharjo Sub District. There are two public health centers in this sub districts; Public Health center 1 and Public Health Center 2. Respondent is program holding in both public health centers. Data applied are secondary data from TB register data and TB medicating. The data analyzed descriptively through frequency distribution. The proceeded data is described and interpreted.

3. RESULT AND DISCUSSION

The research finding in 2014-2016 of TB prevalence in Umbulharjo sub district is 145 Tuberculosis cases. Tuberculosis discovered in Umbulharjo sub district such as new TB BTA (+), repeatedly TB BTA (+), TB BTA (-) Rho (+), Pulmonary extra TB, and child TB. Here is suspect filtering graphic in Umbulharjo sub district:



Graphic I. Filtering TB Suspect in Umbulharjo Public Health Center Year 2014-2016

Based on graphic above can be found that there is increasing case of tuberculosis in Umbulharjo sub district in 2014-2016. The patient percentage between suspect year 2014, 2015,

and 2016 in Umbulharjo sub district sequentially 26.1%, 22.3, and 25.1. There is raising case in 2016.

Another research hold the prevalence study of TB in Padang Pariaman sub district shows percentage rate of patient between suspect was 29.4%, with total cases 326 people and tot al suspect 1109 people[9]. Another research related to TB and DM in RSUP Dr. Kariadi Semarang shows that prevalence of TB between DM patients is 9.1%. This shows there is still low percentage of TB on DM patient in RSUP Dr. Kariadi Semarang[10].

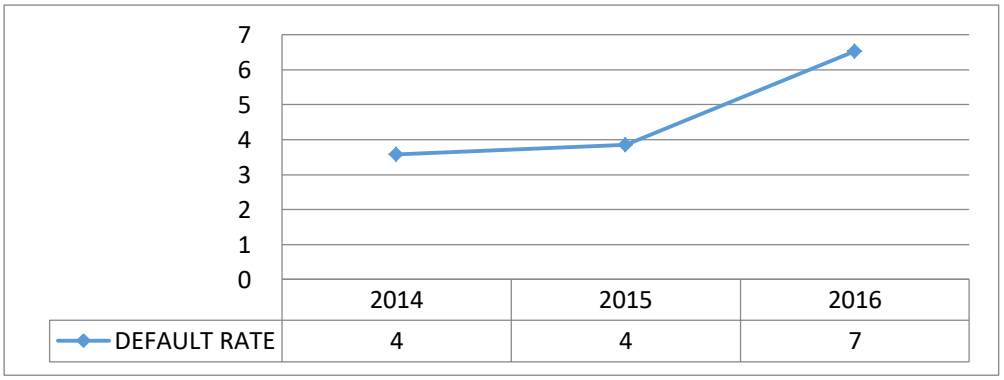
Research of Aditama, etc. concerns program evaluation of controlling pulmonary Tuberculosis in Boyolali sub district shows about case finding, and 86.21% of public health center carries out the active case finding. It's because there was conducted visitation therefore activity at hospital is only medicating coming patient.in clarifying patient, the public health center gets the data from examining the patient's mucus and age. In hospital, every examination held based on disease seriousness level[11].

The research of Nuraisya, etc. states that influence factor to tuberculosis suspect finding in Batang sub district such as characteristic of official of tuberculosis program holder, contact tracking, and laboratory official work. The reflection of tuberculosis suspect finding in Batang sub district such as most of health official old age (48), most of them are men (51.2%), most of them are high educated (97.6%), and most of them are D3 nurse (7.2)[12].

Based on Yogyakarta health service, the most TB case is in Umbulharjo sub district. Based on TB report of Yogyakarta Health Service in 2014, TB case in Public health center Umbulharjo 1 is the most cases. In 2015, TB case in public health center Umbulharjo 1 is still high. The data shows there is found TB BTA (+) case in 2014, 2015, and 2016 in Umbulharjo sub district. It becomes special concern of health official, because through finding the new TB BTA (+) case becomes risk factor of TB infection in public health center work area.

The TB BTA (+) case in Umbulharjo from 2014-2016 is fluctuating. Raising in 2016, 46 cases comparing in 2015, 26 cases and in 2014, 28 cases. TB patient with the examination result positive BTA is the main spreading source. The BTA (+) patient can spreads Microbacterium tuberculosis to the air when sneezing or cough in type droplet (mucus splash). Droplet contains of germ which can resist in the air at room temperature for several hours. The one who diagnozed TB BAT (+) can spread for 10 – 15 people every year[13].

Based on this research data, there are insignificantly defult/drop out TB medicating in Umburharjo sub district. In 2014-2016 sequentially 1patient, 1 patient, and 2 patients. The defult case in Umburharjo sub district worried becomes infection source which uncompletely medicated. Based on information from public health center program holder, the Public health center has trying to take the patient having treatment anymore. Here, the TB defult graphic in Ubulharjo sub district.



Graphic 2. TB Rate Default in Umbulharjo Sub District Year 2014 2016

The controlling of pulmonary tuberculosis in Indonesia states that drop out level of pulmonary tuberculosis can't be more than 10%, this aims to reduce painfulness and mortality level of pulmonary tuberculosis drop out of this medicating also can cause program target in achieving recovery level 85% failed[2]. The defult level rate in Umbulharjo sub district in 2014-2016 sequentially 4%, 4%, and 7%.

4. DISCUSSION

There are many factors raising TB BTA (+) spreading. According to Setiarini research (2011), states that the educated level, economic status, and smoking habit relating to pulmonary tuberculosis for adult in public health center of Tuan Tuan, Ketapang sub district, West kalimantan[14]. This research shows that house phisical condition relating to pulmonary tuberculosis prevelance in DKI Jakarta, Banten, and South Sulawesi provinces. The behaviors make easier the infection TB are such as opening bedroom everyday taking infected risk 1.36 times and doesn't dry the bed in the sun taking infected risk 1.423 times. Another factor is damaged semen floor/ parquet/ground floor take infected risk 1.731 times than ceramics/ marble/ flrtile[15].

The research finding of Nugroho (2011), the drop out cause factor of patient medicating of TB are such as medication duration through insentive level until the indication dissappear and patient recovered, paid medicating cost, the patient doesn't know the medicating phase, it doesn't have controll of taking medicine, the difficultness of transportation to BP4, there is medicine side effect,ignorance of illness complication[16]. Another research stated that the high drop out case of TB medication caused by many factors, such as the low of income, low educated, the bad health behavior, and the medicine side effect[17].

The preventing effort has taken in Umbulharjo sub district to handling the case and prevention. The strategy and policy of controlling TB regulated on PMK No. 67 concerning controlling Tuberculosis. Controlling strategy TB includes strengthening program TB, increasing quality service access of TB, controlling risk factor, increasing TB partnership through coordination forum of TB, increasing social independence, and strengthening program management[18].

5. CONCLUSION

Based on data, there is still finding new TB BTA (+) case in 2014, 2015, and 2016 in Umbulharjo sub district. TB BTA (+) case in Umbulharjo sub district from 2014-2016 is fluctuate. It raises in 2016, 46 cases than 26 cases in 2015 and 28 cases in 2014. The effort to handling and preventing has carried out by public health center.

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