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IDENTIFICATION OF LUNGS TUBERCULOSIS (TB) AT *HUMAN IMMUNODEFICIENCY VIRUS* (HIV) SUFFERERS IN BITUNG

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ABSTRACT

Human Immunodeficiency Virus (HIV) was virus that caused *Aquired Immunodeficiency Syndrome* (AIDS), a syndrome that caused decreasing of body immunity. Someone who infected HIV in his body, number and function of *Cluster of Differentiation 4* (CD4) were decreasing, so the ability of body immunity system to prevent the diseases growing was decreasing, one of the disease was Tuberculosis (TB). Someone with HIV/AIDS (ODHA) had bigger risk to have TB than they who weren't infected HIV/AIDS. Experiment method that used at this research was *Immunochromatography Test* (ICT) by using *One Step Tuberculosis (TB) Antibody Rapid Test Cassette* for 15 minutes, and then the result was presented. The aim of this research was to identify Lungs Tuberculosis (TB) at *Human Immunodeficiency Virus* (HIV) sufferers who came to get therapy at RSUD Bitung City.

This research was used analytical descriptive research through laboratory test. Population of this research was 31 persons consisted of 15 persons with HIV and 16 persons with AIDS. Sample of this research was 17 persons with sampling system of *accidental sampling.* The result showed that number of respondents related with HIV and TB were 4 respondents (23,5%) infected with TB and 13 respondents (76,5 %) wasn't infected TB.

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INTRODUCTION

In Indonesia, there were some dangerous infected diseases, one of them was dangerous virus called *Human Immunodeficiency Virus* (HIV). HIV was virus that could cause *Acquired Immunodeficiency Syndrome* (AIDS) disease by fighting white blood cell called Cluster of Differentiation 4 (CD4) that could damage human body immune system. CD4 cell was much needed in human body for human immune. Without human immune so when someone was stricken with disease so our body didn't have protection (Hasdianah, dkk, 2014).

People with HIV/AIDS (ODHA) were much susceptible with disease that related with body immune so those diseases would be chronically an even caused death. One of those diseases was tuberculosis (TB). Lungs Tuberculosis (TB) was bacteria that caused disease, usually stricken lungs but could also stricken other parts of body, such as brain, kidney, or backbone. TB was free air bacteria so that much easy entered into human body and could be active inside if the body immune was decreasing. If TB wasn't treated, so the microbe would be active and then could cause serious health problem even death (*NSW Health Factsheet-Indonesia*).

Fact about Tuberculosis (TB) and *Human Immunodeficiency Virus* (HIV) in Indonesia, from 40 million people who were estimated suffering with HIV/AIDS, 13 million were also suffered with TB. If someone's body immune was going to weak, it was much risked to be infected with TB because the place of TB microbe's proliferating located at people with weak body immune (*NSW Health Factsheet-Indonesia*).

HIV/AIDS cases figured on Health Profile of North Sulawesi in 2012, showed a distribution of HIV cases were 84 cases and HIV cases were 150 cases. Distribution of HIV/AIDS since 1997 s/d 2012 was 100 cases. From those data distribution, Bitung City was included into city with 2nd major of prevalence of HIV infection in North Sulawesi (Health Profile, 2012).

Survey done in 2915 in RSUD Bitung City, with patients list (suspect) of TB disease at HIV sufferers, there were 3 cases of positive TB at people with HIV/AIDS, in 2015 it was found data that showed 31 cases of people with HIV/AIDS (ODHA), with the details as follow: 23 persons men and 8 persons women. From 31 cases, there were 16 persons infected with AIDS, while 15 persons infected with HIV. Effect of TB toward progressivity of HIV infection consisted of HIV sufferers often had high *viral loads* HIV, decreasing of immunity was faster and live defend was shorter than HIV sufferers without TB (Uyainah A., 2009). From the data above, it showed how big the risk of lungs Tuberculosis (TB) at *Human Immunodeficiency Virus* (HIV) sufferers could increase and be the deadly risk for the societies of Bitung City and around.

METHODS

Kind of research used was Analytical Descriptive research, that was a research which purposed to identify lung Tuberculosis (TB) at *Human Immunodeficiency Virus* (HIV) sufferers who came to get therapy in RSUD Bitung, the population in this research was 31 respondents with Acintal sampling of 17 respondents; considered that these respondents were much sensitive and they were kept as secret, related with sensitivity level of respondents so it was done the steps of other stages in order to strengthen the available data by using the following ways and stages:

There were 3 stages at this research, consisted of Pre Analytic, Analytic, and Post Analytic. At Pre Analytic stage, it was done first survey in RSUD Bitung. The data found in 2015, there were 3 cases TB at people with HIV/AIDS (ODHA), 31 cases of ODHA consisted of 15 cases people with HIV and 16 cases people with AIDS. At this stage, it didn't need special preparation, dara accomplishment, or interview because the data were being secreted related with respondents.

The next stage, that was Analytical, researcher did TB test by using ICT method at the respondents who suffered with HIV/AIDS who came to get treatment or who had awareness to come to get treatment in RSUD Bitung.

RESULTS

Based on the research result conducted at Laboratory of RSUD Bitung, it was found sample of 17 respondents, with details as follow:

Table 1. Respondents' Distribution based on Gender

No	Gender	Number	Percentage
1	Men	12	**70,6 %**
2	Women	5	**29,4 %**
	Total	**17**	**100 %**

Based on table 1, it showed that respondents with gender of men were more 12 (70,6%) than

respondents with gender of women 5 (29,4%) respondents.

Table 2. Respondents' Distribution based on TB Test Result

No	Test Result	Number	Percentage
1	Positive	4	**23,5 %**
2	Negative	13	**76,5 %**
	Total	**17**	**100 %**

Based on table 2, it showed that from 17 patients who consisted of 4 respondents (23,5 %) with TB positive and 13 respondents (76,5 %) with TB negative.

Guidance of implementation of TB-HIV 2015 collaboration program showed that HIV indicated impact toward increasing of TB in all the worlds that caused number of TB cases in the societies. HIV was also the biggest challenge in controlling TB and there were many evidences that the controlling of TB wouldn't be successful without the success of controlling the HIV. On the contrary, TB was opportunistic infection that much occurred and the main cause of ODHA death. (Health Ministry RI General Directorate of Disease Controlling and Environment Recapitalization, 2015)

Table 2 showed that 4 respondents (23,5 %) were with TB positive. n Spiritia Foundation in Fajrin Prislia 2012, said that the main target of HIV infection was CD4. If its number was decreasing, so the body protection system was very weak to fight infection. If number of CD4 <200 so our body immune system was damaged enough so the opportunistic infection was easily stricken our body. (Fajrin P., 2012)

Table 2 showed that 13 respondents (76,5 %) were with TB negative. Health Ministry RI General Directorate P2PL 2011 in Fajrin Prislia 2012, stated that in increasing body immune for ODHA, it was found Antiretroviral (ARV) drug. However, ARV couldn't cure HIV but increasing body immune of ODHA so that they were able to increase live quality for ODHA. ARV was also proved able to decrease rate of death and suffer at ODHA. Rachmawati 2009 in Fajrin Prislia 2012, stated that ARV treatment had work mechanism in order to prevent virus replication stage by stage decreasing number of virus in the blood. According to Prof Djubairi Djoerban ARV was effective to be prevention. ODHA who consumed ARV, their infection risk was decreased until 80%. (Fajrin P., 2012)

The result in this research showed that HIV patients consisted of 17 patients with 13 respondents (76,5%) of HIV non TB and 4 respondents (23,5%) of co infection TB-HIV, this research was not far from the research of Surjanto E.,et.al in a research about Profile of Patients with Co Infection TB-HIV in RS Moewardi Surakarta 2010-2011, it showed that HIV/AIDS patients were 107 patients consisted of HIV non TB 70 patients (65,42%) and co infection TB-HIV 37 patients (34,58%). (Surjanto E., dkk, 2012)

CONCLUSION

Based on the research result, it could be concluded that from 17 respondents examined, there were 4 respondents (23,5%) infected TB and 13 respondents (76,5 %) weren't infected TB. The result was only based on the respondents who visited to test themselves in RSUD Bitung, where there were many of them who hadn't been aware about the test and even influenced by inferiority because generally the society had categorized that they who infected that disease were categorized into human with poor characteristic or marginalized community; however there was group of society in Bitung that made kind of community that cared with health and safety of citizens who were hoped would help Tuberculosis (TB) and HIV/AIDS sufferers at the future.

Suggestion

1. HIV sufferers had better to consume Anti Retroviral (ARV) drug routinely so the risk of infected with disease that stricken body immune (opportunistic infection) was smaller.
2. The societies who weren't infected with HIV suggested to do prevention such as didn't do free sex, moreover with ODHA, didn't use hypodermic needle agar collectively and didn't contact directly with blood of ODHA.
3. Societies who hadn't been infected TB suggested to prevent themselves such as kept healthy life style, clean environment, avoid the sputum sprinkling of people with TB.
4. It was suggested for people with TB to always used masker in order to avoid the sprinkling of sputum while got cough or sneeze.
5. Societies/family of they who infected with HIV/AIDS had better to give support and motivation to get therapy or to come to hospital in order to encourage the caring process even could help morally or materially.
6. It was suggested for next researcher to be able to conduct more in depth research about co infection TB-HIV.

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