



THE PREVALENCE OF LEPROSY AT PRIMARY HEALTH CARE KARANG TALIWANG IN MATARAM, INDONESIA

Dermatology

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ABSTRACT

Background: Leprosy is a chronic infectious disease that caused by *Mycobacterium leprae*. It's still endemic especially in underdeveloped or developing countries. The prevalence has decreased since the introduction of MDT in the beginning of the 1980s.

Purpose: to determine the prevalence of leprosy in Primary Health Care Outpatient Karang Taliwang Mataram January-December 2018.

Methods: A descriptive retrospective study which data gathered from medical record.

Results: The leprosy number is 3 patients. Prevalence of leprosy in Primary Health Care Outpatient Karang Taliwang Mataram is 0.74 per 10.000 population. The predominant age group were adulthood >15 year old (100%) with all patient is male (100%). The most tribe is Balinese (66.67 %), and the most leprosy type of patients were Multibacillary (100%).

Conclusion: The prevalence of leprosy in Primary Health Care Karang Taliwang Mataram is 0.74 per 10.000 population. Most patient is at adulthood, male, Balinese tribe, and Multi Bacillary type.

KEYWORDS

Leprosy, Prevalence, Type

INTRODUCTION

Leprosy is known as 'kusta' in Indonesia. The word 'kusta' derived from Sanskrit, means 'a group of skin diseases in general'. Leprosy also known as Morbus Hansen. It was the name of the man who discovered its causative agent.^{1,2,3} Leprosy is a chronic disseminated disease that caused by *Mycobacterium leprosy*. Leprosy mainly affects peripheral nervous system, and also skin, mucous, muscles, bone, and other organs except central nervous system.^{3,4,5}

Regarding to WHO, in 2018, new cases of leprosy in the world is around 210.758. Southeast Asean is the most (158.118), followed by America (28.806), then Africa (20.004).^{6,7} Indonesia has reach the leprosy eliminated status, with the prevalence <1 per 10.000 population in 2000. In Indonesia, new cases of leprosy mostly found in East Java (3.373), West Java (1.813), Central Java (1.644), South Sulawesi (1.091).^{1,8}

The main symptoms of leprosy are skin sores with pale-colored or redness with numbness, loss of feeling (nerve damage), and bacterial finding of *M.leprae*. Those symptoms are cardinal sign and used to diagnose leprosy.⁹⁻¹¹

For treatment purpose, WHO has differentiated leprosy into two (2) different category, Paucibaciller (PB) and Multibaciller (MB). In PB there were 1-5 lesions that asymmetrically with loss of feeling, but with only one(1) nerve affected. In MB, there were > 5 lesions that symmetrically and the loss of feeling might be found or not.^{1,12,13} Regimen of leprosy treatment is MDT (multidrug therapy) which is given in 28 days.^{13,14,15}

In Mataram City, leprosy cases are rarely being discussed. There is only few previous study leprosy. The aim of this study is to know the prevalence of leprosy in Primary Health Care Karang Taliwang Mataram during January-December 2018. This study will give information to health workers, and encourage early detection of leprosy.

METHOD

This study is a retrospective descriptive that use medical record of patient in Primary Health Care Karang Taliwang Mataram during January-December 2018.

Population in this study is all people in working area of Primary Health Care Karang Taliwang Mataram during January-December 2018. Non random sampling with total sampling are the technique that used in this study. The inclusion criterion of this study is all patient with leprosy that attend the Primary Health Care Karang Taliwang Mataram during

January-December 2018 with complete identity (name, age, sex, tribe and type of leprosy. Exclusion criteria is patient with incomplete identity.

RESULT AND DISCUSSION

There are 4 patients with leprosy according to the medical record. But only 3 patients that fit the inclusion criteria.

The prevalence of leprosy in Primary Health Care Karang Taliwang Mataram is 0.74 per 10.000 population. In 2018, Primary Health Care Karang Taliwang Mataram work for 40.258 people. Meanwhile, in Bali, the prevalence based on the data from health department was found around 0.21 per 10.000 population.¹

The prevalence of leprosy in Primary Health Care Karang Taliwang Mataram is low. It is caused by the elimination programme that run well or this was an ice berg phenomenon. There are several factors that affect the dissemination of leprosy, for example the pathogenesis, immunity, genetic variation, social economic situation, and environment state.¹⁶

Table 1. Distribution of leprosy patient based on age (N=3)

Variables	Total	Percentage (%)
Age		
<15	0	0
>15	3	100
Sex		
Male	3	100
Female	0	0
Tribe		
Sasak	1	33.33
Balinese	2	66.67
Type of leprosy		
MB (Multi Baciller)	3	100
PB (Pauci Baciller)	0	0

Based on theory, the highest rate of leprosy is at productive age, which is 25-35 years old. This was because the high activity during productive age that may contribute in disease transmission and also because of leprosy has a very long incubation period so it will be manifest at older age.^{6,17} In Primary Health Care Karang Taliwang Mataram, all leprosy patient (100%) is at productive age.

All the leprosy patients in Primary Health Care Karang Taliwang Mataram is male. This might be happen because in eastern culture woman tend to stay at home as a housewife.^{16,18}

Native tribe in Lombok Island is Sasak (80%), and the rest are Bali, Sumbawa, Bima, And Javanese. Because, the most of population in Primary Health Care Karang Taliwang Mataram working area is Balinese, 66.67% cases is Balinese tribe, and 33.33% is Sasak.

Based on the theory, tribe that tend to affected by leprosy is Madura and Bugis (can't be explain why).¹⁹ Each tribe has its own culture. For example, Balinese people in Lombok still live together with parents eventhough they already got married. It increases contact among infected people.

From this report, multi bacillary type is the most common (100%). This might be affected by genetic, level of virulence, immunity, knowledge, medication compliance, and many more. If *Mycobacterium Leprae* affected strong immune system, it will develop into PB, but if the cellular immune respond is bad, it will manifest as MB.^{19,20} Meanwhile, in dermatology clinic at Sanglah Hospital, there were 44 new cases with 30 (68,18%) MB and 14 (31,81%) PB.²¹

CONCLUSION

The prevalence of leprosy in Primary Health Care Karang Taliwang Mataram is 0.74 per 10.000 population. Most patient is at adulthood and productive age (>15 years old), male, Balinese tribe, and Multi Bacillary type.

Deep further research with various variable and larger sample is needed to find more actual result of study.

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