RINGKASAN

FAKTOR RESIKO MIKROFILAREMIA DI KABUPATEN MUNA PROVINSI SULAWESI TENGGARA.

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Filariasis (penyakit kaki gajah) ialah penyakit menular yang di sebabkan karena infeksi cacing filaria, yang hidup di saluran dan kelenjar getah bening (limfe) serta menyebabkan gejala akut, kronis dan di tularkan oleh berbagai jenis nyamuk.(Depkes. RI, 2001)

Penyakit ini terutama merupakan penyakit daerah tropis, tetapi juga dapat di temukan di daerah sub tropis seperti Taiwan, India dan China. Meskipun pada umumnya di temukan di dataran rendah, kadang-kadang juga dapat di temukan di daerah berbukit (yang tidak tinggi) tergantung adanya nyamuk vektor yang menularkannya. Di luar Indonesia filariasis limfatik di sebabkan oleh dua spesies cacing filaria yaitu *Wuchereria bancrofti* dan *Brugia malayi*. *Wuchereria bancrofti* penyebarannya lebih luas yaitu di negara-negara Afrika, India, China, Asia Tenggara, daerah Pasifik dan Amerika Latin, sedangkan *Brugia malayi* di temukan di China dan Asia Tenggara. (Thomas Strikland, 1991)

Sampai dengan akhir Pelita VI, filariasis atau penyakit kaki gajah, masih merupakan masalah kesehatan masyarakat secara nasional terutama di daerah pedesaan luar Jawa dan Bali. Program pemberantasannya yang telah di mulai sejak Pelita I telah banyak berhasil menurunkan prevalensi penyakit ini pada lokasi-lokasi pemberantasan.

Program pemberantasan filariasis di provinsi Sulawesi Tenggara telah di laksanakan sejak tahun 1980 sampai sekarang, daerah endemis filaria dengan Mikrofilaria rate 1.1 % - 24.69 % di temukan di empat kabupaten, 19 kecamatan dan 64 desa.

Di kabupaten Muna, hasil survei darah jari yang di laksanakan sejak tahun 1986 sampai dengan tahun 1998 menunjukkan Mikrofilaria rate masih berkisar antara 2.06% - 7.67 %.

Penelitian ini bertujuan untuk mengetahui faktor resiko terhadap kejadian penyakit filaria, namun karena keterbatasan pengetahuan dan kemampuan peneliti maka hanya beberapa variabel saja yang di pilih untuk di teliti. Variabel umur ialah seberapa jauh faktor umur dapat mempengaruhi terjadinya mikrofilaremia, variabel pekerjaan sebagai petani yang menjaga kebunnya pada malam hari seberapa besar bisa mempengaruhi terjadinya mikrofilaremia, variabel jarak tempat tinggal dengan tempat tinggal penderita elefantiasis juga seberapa besar dapat pula mempengaruhi terjadinya mikrofilaremia, variabel (minum obat *Diethylcarbamazine*, variabel pendidikan, variabel lingkungan tempat tinggal yang berawa atau tidak) seberapa besar juga mempengaruhi kejadian mikrofilaremia. Sementara dari vektor dalam hal ini nyamuk (jenis, puncak menggigit, kebiasaan menggigit) juga diteliti seberapa besar bisa mempengaruhi

mikrofilaremia. Variabel yang tidak diteliti adalah variable (imunitas, ras, genetik, atatus perkawinan, status gizi).

Jenis penelitian ini adalah penelitian observasional dengan pendekatan kasus kontrol. Populasi adalah seluruh penduduk desa yang endemis filaria . Desa endemis di tentukan setelah melihat hasil data sekunder dari survei cepat yang di laksanakan oleh dinas kesehatan kabupaten Muna pada tahun 2000. Sampel untuk kelompok kasus adalah responden yang pada pemeriksaan darah jari di malam hari terdapat mikrofilaria positif (mikrofilaremia), sedangkan sampel untuk kelompok kontrol adalah responden yang pada pemeriksaan darah jari di malam hari tidak terdapat mikrofilaria. Pada kelompok kontrol ini di pilih responden yang masih punya kekerabatan satu desa dengan kelompok kasus dengan pencuplikan acak sederhana (perbandingan 1 kasus, 1 kontrol). Besar sampel minimal adalah 75 responden untuk kelompok kasus dan 75 responden untuk kelompok kontrol, dengan perbandingan 1:1 (1 kasus, 1 kontrol) tanpa *matching*.

Variabel yang merupakan faktor resiko (bermakna) berdasarkan analisis tabel 2x2, Lingkungan tempat tinggal yang berawa OR : 10.78 (4.67 - 25.34), Jarak tempat tinggal responden dengan penderita elefantiasis <1 km. OR :5.57 (2.15 - 14.72), Petani yang menjaga kebunnya pada malam hari secara musiman. OR : 3.51(1.37 - 9.12), Umur; *anak dan usia produktif*. OR: 3.43 (1.26 - 9.57), Pekerjaan; petani dan bukan petani. OR: 2.15 (1.00 - 4.67)

Variabel yang merupakan faktor resiko dengan nilai signifikan (<0.05), berdasarkan analisis multivariat, Variabel lingkungan tempat tinggal/berkebun yang berawa/kali dengan P : 0.000 .CI 95% (lower 5.689, upper 63.539), Variabel umur (2 – 15 tahun) dengan P : 0.000.CI 95% (lower 0.000, upper 0.057), Puncak gigitan nyamuk pada > jam 20.00 dengan P :0.004. CI 95% (lower 2.485, upper 120.798), Variabel pekerjaan sebagai petani dengan P : 0.008. CI 95% (lower 2.319, upper 245.300), variabel rancangan petani dengan lama jaga kebun pada malam hari >10 tahun dengan P :0.012. CI 95% (lower 0.007, upper 0.054)

Kelemahan dari penelitian ini adalah; Tehnik pemeriksaan dengan pewarnaan Gimsa kurang akurat di banding dengan pemeriksaan ELISA, CFT, dan IFAT, terjadinya bias informasi, karena data faktor resiko di kumpulkan setelah terjadinya mikrofilaremia, Terjadinya bias seleksi, karena sampel terdiri dari dua populasi yang berbeda (kasus dan kontrol), Terjadinya bias karena faktor perancu, yang pada penelitian ini bisa terlihat pada analisa multivariat yang tidak terkontrol yang karena keterbatasan yang ada, belum/tidak di lakukan kontrol.

SUMMARY

RISK FACTORS OF MICROFILAREMIA IN DISTRIC OF MUNA IN SOUTEAST SULAWESI

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Filariasis (elephantiasis) is a transmittable disease caused by infection of worm filarial that lives in gutters and also in lymph nodes, resulting in acute and chronic symptoms, and transmitted by various kinds of mosquito.

Filariasis is a tropical disease, but it may also be found in subtropical areas, such as n Taiwan, India, ans China. Although it is generally found in lowland, it sametimes may be found in hilly areas, depends on the presence of transmitting vector mosquito. In other countries, lymphatic filariasis is caused by two spesies of filarial, i.e., Wuchereria bancrofti and Brugia malayi. Wuchereria bancrofti spreads in wider areas, such as those in Afrika, India, China, Southeast Asia, Pacific, and South America, while Brugia malayi is found in China and Southeast Asia.

To the end of Pelita VI, filariasis or elephantiasis remained a national public health problem, particularly in rural areas outside Java and Bali. The eradication progran that had been commenced since Pelita I have successfully reduced the prevalence of the disease in eradication areas.

Filariasis eradication program in Souteast Sulawesi had been undertaken since 1980 until today. Filaria endemic area with microfilaria rate 1.1% - 24.69% was found in four districs, 19 subdistrics and 64 villages.

In the distric of Muna, results of finger blood survey from 1986 to 1998 indicated that microfilaria rate remained about 2.06% - 7.67%.

This study was aimed to identify risk factor in the occurrence of filariasis. However, due to the limitation in knowledge and capability, the author only observed several selected variables. Regarding the respondents, those variables were age, occupation, distance of dwelling, drug consumption, education, and environment, while regarding the vector (mosquito), variables observed were its type, biting peak and biting habit. Variables not observed were immunity, race, genetic, marriage status, and nutritional status.

This was an observational study using control case approach. Population was all inhabitants of filarial endemic villages, which were determined by observing secondary data obtained from fast survey by Health Office, District of Muna, in 2000. Samples for case group were respondents who showed positive microfilaria (microfilaremia) as indicated by the result og finger blood examination at night, while samples for control group were those showed no microfilaria using the same examination at night. Control was respondents who were relatives of those in case group. They were taken using simple random sampling, with case and control ratio of 1:1. Sample sze was 75 respondents in each group without matching.

Based on analysis using 2x2 table, variables that presented as significant risk factors were marshy dwelling environment (OR: 10.78, 4.67 – 25.34), distance between dwelling of the respondents and those of the elephantiasis patients of less than 1 km (OR: 5.57, 2.15 – 14.72), farmer who seasonally guard the plantation at night (OR: 3.51, 1.37 – 9.12), productive age and childhooh and > 60 year age (OR: 0.38, 0.18 – 0.81), and farmer and non- farmer (OR: 2.15, 1.00 – 4.67).

Based on multivariate analysis, variables that presented as significant risk factor were marshy dwelling environment (P= 0.000, CI 95%, lower 5.689, upper 63.539), age of 2 – 15 years (P= 0.000, CI 95%, lower 0.000, upper 0.057), biting peak at above 8 p.m. (P= 0.004, CI 95%, lower 2.485, upper 120.798), occupation as farmer (P= 0.008, CI 95%, lower 2.319, upper 245.300), and plantation night-guard worked more than 10 years (P= 0.012, CI 95%, lower 0.007, upper 0.054).

The shortages of this study were the exam manation tecnic (Giemsa-stained) used was les accurate compart to ELISA, CFT, and IFAT tests, information bias, since the risk factors were observed after the occurrence of microfilaria; selection bias, since samples consisted of two different populations (case and control); and bias due to confounding factor as indicated by uncontrolled multivariate analysis.

ABSTRACT

RISK FACTORS OF MICROFILAREMIA IN DISTRIC OF MUNA IN SOUTEAST SULAWESI

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Results of rapid mapping by the Department of Health in year 2000 showed that filariasis remained a health problem with microfilaremia rate of 0.5% - 19.64%. In the Distric of Muna, finger blood survey n 199 revealed a microfilarema rate of 4.69% - 6.89%. These data indicated that a study aimed to investigate risk factors releted to the prevalence of microfilaremia was necessary.

This was on observational analytic epidemiological study that use case control design or Retrospective Study investigated the exrent of filaremia prevalence.

Sample consisted of case and control groups. Case group were 75 respondents with positive microfilaremia in filarial endemc village in Distric of Muna, who were taken based on the results of rapid survey by Health Office, Distric of Muna in 2001. The control group was 75 respondents with negative microfilaremia, taken from the relatives of the case group. The ratio of case and control groups was, therefore, 1:1. Analysis to the test the hypothesis was undertaken by means of computer software Epi info 2000 and SPSS 10.00 program for Windows.

Results showed descriptively that filariasis vector was the mosquito Anopheles barbirotris, with biting peak at 21.00 – 22.00. The highest density (MHD), either bait or night resting, was outdoor. The most potential breeding place was sping, creek, and ditch.

Analysis using 2 x 2 table revealed that the significant Odd ratio was found in the distance of dweling area, individuals with elephantiasis, farmer, plantation night-guard who worked more than 10 year, age; Children as compared to individuals in productive age.

Results of multivariate regression logistic analysis demonstrated that microfilaremia prevalence was affected significantly by the follwing factors: respondents aged 2 – 15 years, farmer, palantation night-guard who worked more than 10 years, marsh or creeks in dwelling area or plantation, age; children with productive age.

The shortages of this study were the exam manation tecnic (Giemsa-stained) used was les accurate compart to ELISA, CFT, and IFAT tests, information bias, since the risk factors were observed after the occurrence of microfilaria; selection bias, since samples consisted of two different populations (case and control); and bias due to confounding factor as indicated by uncontrolled multivariate analysis.

Keywords: microfilaremia, vector mosquito, risk factors.