Analisis Spasial Epidemiologi Malaria di Kecamatan Lamboya Kabupaten Sumba Barat Provinsi Nusa Tenggara Timur

INTISARI

Latar Belakang: Kecamatan Lamboya merupakan salah satu wilayah endemis tinggi malaria. Berdasarkan data Dinas Kesehatan Kabupaten Sumba Barat tahun 2022, jumlah penderita malaria mencapai 938 kasus. Untuk menganalisa sebaran kasus malaria, penentuan wilayah *receptive* dan *vulnerable*, pengaruh faktor lingkungan dan sosial budaya diperlukan analisis spasial untuk tindakan preventif malaria.
Tujuan: Untuk mengetahui pola sebaran spasial malaria, tipe habitat jentik, pemetaan wilayah *receptive*, *vulnerable* dan faktor risiko di Kecamatan Lamboya.
Metode: Merupakan observasional analitik dengan rancangan *unmatched case control*. Data sekunder malaria bulan Januari 2023 diperoleh melalui e-SISMAL PKM Kabukarudi dan klinik malaria. Data primer dengan melakukan wawancara, penentuan titik koordinat serta penangkapan nyamuk di Desa Palamoko (1malam). Sampel penelitian:36 kasus dan 36 kontrol. Data diolah dengan menggunakan QGIS dan IBM SPSS 22.
Hasil: Sebaran kasus malaria berpola random dekat dengan habitat nyamuk pada radius 500m – 1000m. Tipe habitat positif jentik; sawah, mata air, muara, sungai, genangan dan kubangan. Lima wilayah *receptive*: Patiala Bawa, Palamoko, Lamboya Bawa, Ringurara dan Watukarere serta tiga wilayah *vulnerable*: Wailibo, Kabukarudi dan Rajaka. Hasil identifikasi nyamuk ditemukan; *An.vagus*, *An.limosus*, *An.subpictus*, *An.indefinitus*, dan *An.annularis*. Hasil uji *chi-square* keberadaan habitat *p*= 0,000, OR 14,091, kebiasaan keluar malam *p*= 0,001, OR 10,818, penggunaan kelambu *p*= 0,000, OR 6,818, menggantung baju *p*= 0,000, OR 11,364 penggunaan APD *p*=0,014, OR 3,500 penggunakan obat nyamuk *p*=0,018, OR 3,143 ada hubungan yang signifikan terhadap kejadian malaria, sementara bentuk fisik rumah *p*= 0,096, keberadaan kandang ternak *p*= 0,190 tidak berpengaruh terhadap kejadian malaria.
Kesimpulan: Pola sebaran kasus malaria menyebar mendekati habitat perkembangbiakan nyamuk. Tipe habitat jentik yaitu: sawah, genangan, kubangan, mata air, muara dan sungai. Kapadatan larva dan nyamuk *Anopheles* cukup tinggi di Kecamatan Lamboya. Ditemukannya potensial vektor malaria dan habitat jentik menunjukkan bahwa Kecamatan Lamboya masih berpotensi tinggi untuk terjadinya penularan malaria baik *indigenous* maupun impor.
Kata Kunci: Malaria, spasial, *receptive*, *vulnerable*, *GIS*

Spatial Analysis of Malaria Epidemiology in Lamboya District, West Sumba Regency, East Nusa Tenggara Province

ABSTRACT

Background: Lamboya sub-district is one of the high malaria endemic areas. Based on data from the West Sumba Regency Health Office in 2022, the number of malaria patients reached 938 cases. To analyze the spread of malaria cases, determination of receptive and vulnerable areas, the influence of environmental and socio-cultural factors requires spatial analysis for malaria preventive measures.
Objective: To determine the spatial distribution pattern of malaria, larval habitat type, mapping of receptive, vulnerable areas and risk factors in Lamboya District.
Method: It is an analytical observational with an unmatched case control design. Secondary malaria data for January 2023 was obtained through e-SISMAL PKM Kabukarudi and malaria clinics. Primary data by conducting interviews, determining coordinate points and catching mosquitoes in Palamoko Village (1night). Samples: 36 cases and 36 controls. Data processed using QGIS and IBM SPSS 22
Results: The distribution of malaria cases is randomly patterned close to mosquito habitat in a radius of 500m – 1000m. Positive habitat type of larvae; paddy fields, springs, estuaries, rivers, puddles and wallows. Five receptive regions: Patiala Bawa, Palamoko, Lamboya Bawa, Ringurara and Watukarere as well as three vulnerable regions: Wailibo, Kabukarudi and Rajaka. Identification of mosquitoes found; *An.vagus, An.limosus, An.subpictus, An.indefinitus*, and *An.annularis*. Chi-square test results of habitat presence p= 0.000, OR 14.091, night exit habits *p*= 0.001, OR 10.818, use of mosquito nets p= 0.000, OR 6.818, hanging clothes *p*= 0.000, OR 11.364 use of PPE p = 0.014, OR 3.500 use of mosquito repellent *p*= 0.018, OR 3.143 there was a significant relationship with the incidence of malaria, while the physical form of the house p = 0.096, the presence of cattle sheds p = 0.190 had no effect on the incidence of malaria.
Conclusion: The pattern of distribution of malaria cases spreads close to mosquito breeding habitats. The habitat types of larvae are: paddy fields, puddles, wallows, springs, estuaries and rivers. The density of larvae and Anopheles mosquitoes is quite high in Lamboya District. The discovery of potential malaria vectors and larval habitats shows that Lamboya District still has a high potential for malaria transmission, both indigenous and imported.
Keywords: Malaria, spatial, receptive, vulnerable, GIS