

Prevalence and Factors Associated with Multiple Parasitic Infections among Rural Community in Kano State Nigeria

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Abstract : Introduction: Parasitic infections are major public health problems worldwide, particularly in developing countries. Two third of the world population is infected while about 3 billion are at risk of parasitic infections. It is demonstrated that most parasitic infections occur as multiple infections especially among poor and rural communities of most countries in the tropical regions. Parasitic infections are endemic in Nigeria, yet multiple infections are rarely reported. The study aimed to estimate the prevalence and identify factors associating with multiple parasitic infections among rural population in Kano State Nigeria. Methodology: A cross-sectional survey was conducted from June to August 2013 in rural Kano State, Nigeria. Three samples stool, urine, and blood were collected from each of the 551 volunteers aged between one and ninety years old recruited for the survey. A pre-tested questionnaire was used to obtain epidemiological data. Data were analysed using appropriate descriptive, univariate and multivariate logistic regression methods. Major findings: The participants were 61.7% male, 38.3% female, and 69.0% were adults of 15 years and above. Overall, 463 (84%) were infected with parasitic infections among which 60.9% had multiple infections. A total of 15 parasitic species were recovered, and up to 8 different parasitic species were found concurrently in a single host. Plasmodium was the most common parasite followed by Blastocystis, Entamoeba species, and hookworms. It was found that presence of an infected family member ($P = 0.017$; $OR = 1.52$; $95\% CI = 1.08, 2.13$) and not wearing shoes outside home ($P = 0.043$; $OR = 1.50$; $95\% CI = 1.01, 2.18$) significantly associated with higher risk of having multiple parasitic infections among the studied population. Conclusion: Parasitic infections pose a public health challenge in the rural community of Kano. Multiple parasitic infections are highly prevalent and presence of an infected family member as well as not wearing proper foot wear outside home increases the risk of infection. Poor hygiene, unfavourable socioeconomic conditions, and culture promote survival and transmission of parasites. There is a need for implementation of integrated approach aimed at controlling or eliminating the infections with emphasis on public awareness.

Keywords : multiple infections, parasitic infections, poor hygiene, risk of infection

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