PREVALENCE OF LYMPHATIC FILARIASIS, MALARIA AND SOIL TRANSMITTED HELMINTHIASIS IN A COMMUNITY OF BARDIYA DISTRICT, WESTERN NEPAL

Samir Ranjitkar1, Michael Alifrangis1, Madhav Adhikari2, Annette Olsen3, Paul E Simonsen3 and Dan Wolf Meyrowitsch4

1Centre for Medical Parasitology, Department of International Health, Immunology and Microbiology, Faculty of Health and Medical Sciences, University of Copenhagen, Denmark; 2Central Department of Microbiology, Tribhuvan University, Nepal; 3Department of Veterinary Disease Biology, 4Department of Public Health, Faculty of Health and Medical Sciences, University of Copenhagen, Denmark

Abstract. Lymphatic filariasis (LF), malaria and soil transmitted helminthiasis (STH) cause major health problems in Nepal, but in spite of this very few studies have been carried out on these parasitic infections in Nepal. A cross sectional survey of all three categories of parasitic infections was carried out in Deudakala Village of Bardiya District, western Nepal. A total of 510 individuals aged 5 years and above were examined from finger prick blood for circulating filarial antigen (CFA), malaria antigen using a rapid diagnostic test (RDT), and malaria DNA using a PCR-based assay. In addition, 317 individuals were examined for soil-transmitted helminth (STH) eggs by the Kato-Katz technique. Prevalence of LF, malaria (antigen) and STH infection was 25.1%, 0.6% and 18.3%, respectively. PCR analysis did not detect any additional malaria cases. The prevalence of LF and STH infections differ significantly among different age groups and ethnic communities. The high prevalence of LF in the community studied indicates an immediate need for implementing a mass drug administration program for its control in this particular geographical area of Nepal.

Keywords: filariasis, helminth, malaria, prevalence, Nepal

Correspondence: Samir Ranjitkar, Centre for Medical Parasitology, Department of International Health, Immunology and Microbiology, Faculty of Health and Medical Sciences, University of Copenhagen, 1356 Denmark.
Tel: +4535327615; Fax: +4535327851
E-mail: samir_ranjitkar@yahoo.com