PARASITIC INFECTIONS IN MALAYSIA: CHANGING AND CHALLENGES

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Abstract. A total of 1,885 blood and stool samples of four main protozoan parasitic infections were retrospectively reviewed from January, 2000 to April, 2004. Eleven of the 1,350 stool samples were shown positive for Cryptosporidium and Giardia infections; one of the 5 cases was clinically diagnosed as gastrointestinal cryptosporidiosis, while 6 cases were giardiasis. In patients with giardiasis, children were among the high-risk groups, making up 66.7% of these patients. The common presenting signs and symptoms were: diarrhea (83.3%), loss of appetite (83.3%), lethargy (83.3%), fever (66.7%), nausea/vomiting (50.0%), abdominal pain (16.7%), dehydration (16.7%) and rigor and chills (16.7%). Metronidazole was the drug of choice and was given to all symptomatic patients (83.3%). For the blood samples, 28 of the 92 peripheral smears for Plasmodium spp infection were diagnosed as malaria. The age range was from 4 to 57, with a median of 32.5 years. The sex ratio (M:F) was 3.6:1, while the age group of 30-44 years was the most commonly affected in both sexes. The majority of patients were foreigners (60.7%) and non-professional (39%). Plasmodium vivax (71%) infection was the most common pathogen found in these patients, along with a history of traveling to an endemic area of malaria (31%). The predominant presenting signs and symptoms were: fever (27%), rigor and chills (24%), nausea/vomiting (15%) and headache (8%). Chloroquine and primaquine was the most common anti-malarial regimen used (78.6%) in these patients. The seroprevalence of toxoplasmosis in different groups was 258/443 (58%): seropositive for IgG 143 (32.3%); IgM 67 (15%); and IgG + IgM 48 (10.8%). The age range was from I to 85, with a mean of 34 (±SD 16.6) years. The predominant age group was 21 to 40 years (126; 28.4%). The sex ratio (M:F) was 1.2:1. Subjects were predominantly male (142; 32%) and the Malay (117; 26.4%). Of these, 32 cases were clinically diagnosed with ocular toxoplasmosis. The range of age was from 10 to 56 years with a mean of 30.5 (±SD 12.05) years. The sex ratio (M:F) was 1:1.7. The majority were in the age group of 21 to 40 years, female (20; 62.5%), and Malay (17; 53%). They were also single (16; 50%), unemployed (12; 37%), and resided outside Kuala Lumpur (21; 65.6%). The more common clinical presentations were blurring of vision (25; 78%), floaters (10; 31%) and pain in the eye (7; 22%). We found that funduscopic examination (100%) and seropositivity for anti-Toxoplasma antibodies (93.7%) were the main reasons for investigation. Choroidoretinitis was the most common clinical diagnosis (69%), while clindamycin was the most frequently used antimicrobial in all cases. Among HIV-infected patients, 10 cases were diagnosed as AIDS-related toxoplastic encephalitis (TE) (9 were active and 1 had relapse TE). In addition, 1 case was confirmed as congenital toxoplosmosis.

INTRODUCTION

Infectious diseases, once expected to be eliminated as public health problems, remain the leading cause of death worldwide (Marshall et al, 1997). To our knowledge, parasitic infections remain highly prevalent in the global arena, particularly in developing countries. Among tropical diseases, malaria has been identified as one of the most important public health problems (Moe Lwin and Umenai, 1999) and is the most important human parasitic disease, affecting over 200 million people and causing more than one million deaths each year (Suyaphun et al, 2002). Given this information, we conducted this study to determine the prevalence of four common protozoan parasitic infections: Cryptosporidium parvum, Giardia lamblia, Plasmodium spp and Toxoplasma gondii. We also aimed to determine the incidence of clinically evident cases of these diseases in the UMMC, Kuala Lumpur. These data will help to update our knowledge and implement standard strategies in terms of prevention and proper management of these diseases.

MATERIALS AND METHODS

Patients

This retrospective and descriptive study was carried out in the University of Malaya Medical Center (UMMC), Kuala Lumpur, a 863-bed facility and the oldest university tertiary referral hospital in Malaysia.