SOME CHARACTERISTICS OF HOSPITALIZED HIV SEROPOSITIVE PATIENTS IN MYANMAR

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Abstract. Twenty-two hospitalized HIV seropositive patients were studied prospectively between July 1991 and January 1992. The majority of the patients were intravenous drug users (IVDUs). Their age ranged from 20 to 38 years with a male preponderence of 12 to 1. Anemia, lymphopenia and thrombocytopenia were observed in 100%, 36% and 41%, respectively. The common pathogens like malaria parasites, *Mycobacterium tuberculosis, Entamoeba histolytica, Streptococcus* and *Salmonella* were isolated/identified rather than opportunistic organisms.

INTRODUCTION

Serological surveillance of HIV infection was conducted among different high-risk groups in Myanmar since 1985. It was not detected till 1988. In 1991, HIV seropositivity rose to 72.9% in intravenous drug users (IVDUs) and 15% in female prostitutes (AIDS prevention and control, Myanmar, 1992). To identify the characteristic features of hospitalized HIV seropositive patients in Myanmar, clinical, hematological, bacteriological, parasitological and mycological studies were carried out on 22 hospitalized patients who were serologically positive for HIV infection.

MATERIALS AND METHODS

Between July 1991 and January 1992, all patients with HIV seropositivity admitted to the Yangon General Hospital and to the Infectious Diseases Hospital, Yangon, were included in the study. Antibodies to HIV were tested by ELISA and confirmed by Western blot.

The clinical presentation including predisposing factors were recorded. Venous blood was collected in plastic bottles containing EDTA. Hemoglobin concentration, total and differential leukocyte counts, platelet count, and erythrocyte sedimentation rate (ESR) were evaluated by standard procedures. Bacteriological, parasitological and mycological studies were undertaken according to the clinical features. Hepatitis B virus surface antigen (HBs Ag) was tested by the reversed hemagglutiantion test.

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RESULTS

The clinical data of 22 patients are presented in Table 1. Fourteen of the patients were IVDUs, three received contaminated blood transfusions. One was a case of bronchiectasis receiving multiple injections at various hospitals and clinics for the last 3 years. Two were jobless and one was from the jail. The ages of the patients ranged from 20 to 38 years with a male to female ratio of 12:1. The common clinical presentations for hospitalization were malaria, lung abscess, tuberculosis of the lung, septicemia, diarrhea, dysentery, alcoholic hepatitis, myopathy and generalized lymphadenopathy.

The hematologic profiles of the patients are shown in Table 2. All were anemic (100%), and six (27.3%) were leukopenic. Only one (4.5%) showed reduced segmented leukocyte count compared to eight (36.4%) with lymphopenia. Nine (40.9%) patients were thrombocytopenic. Pancytopenia was present in 3 cases (13.5%). One patient had acute intravascular hemolysis after taking antimalarial drugs. In two patients there was mild eosinophilia (8% and 10%) which subsequently returned to normal after deworming. ESR was

Table 1

Clinical picture of 22 hospitalized HIV seropositive patients, Yangon, July 1991-January 1992.

Sr No	Age/sex	Clinical presentations	IVDU	HBsAg
1	21 F	Bronchiectasis	−	+
2	28 M	TB lung	−	−
3	30 M	TB lung	−	−
4	28 M	Chronic dysentery	−	−
5	20 M	Gastroenteritis	−	−
6	25 M	Chronic diarrhea	+	+
7	26 M	Chronic diarrhea	+	−
8	20 M	Malaria	−	−
9	27 M	Malaria	+	−
10	30 M	Malaria	+	−
11	23 M	Malaria	+	−
12	30 M	Septicemia	+	−
13	32 M	Septicemia	+	−
14	27 M	Myopathy	+	−
15	23 M	Myopathy	+	−
16	26 M	Alcoholic hepatitis	+	−
17	27 M	Alcoholic hepatitis	+	−
18	38 M	Nephrotic syndrome	+	−
19	23 M	PGL	+	+
20	33 M	ITP	+	−
21	33 F	Thalassemia	−	−
22	24 M	Pemphigus foliacus	−	−

PGL = Persistant generalized lymphadenopathy
ITP = Idiopathic thrombocytopenic purpura

Table 2

Hematological profile of the hospitalized HIV seropositive patients, Yangon, July 1991-January 1992.

Hb conc < 14 gm/dl	WBC $< 4{,}000/mm^3$	Seg WBC $< 1{,}600/mm^3$	Lymphocytes $< 800/mm^3$	Platelets $< 150{,}000/mm^3$	ESR > 20mm
22/22	6/22	1/22	8/22	9/22	11/22
100%	27.3%	4.5%	36.4%	40.9%	50%

Hb conc = Hemoglobin concentration
WBC = Total white cell count
Seg WBC = Segmented white cell count
ESR = Erythrocyte sedimentation rate

raised in 50% of the cases. Peripheral blood films were studied after staining with Leishman and Giemsa stains. There were no significant morphological abnormalities in the white and red blood cells.

Bacteria and parasites isolated are depicted in Table 3. Pathogenic streptococci were isolated from blood culture and *Escherichia coli, Vibrios, Klebsiella, Enterobacter, Salmonella* and *Proteus* were detected in stool cultures. Common parasites

Table 3

Bacteria and parasites isolated from hospitalized HIV seropositive patients, Yangon, July 1991-January 1992.

Sr No	Bacteria from blood	Bacteria from stool	Parasites from stool	Parasites from sputum
1	ND	ND	ND	*P. carini* not deleted
2	ND	ND	ND	*P. carini* not deleted
3	ND	ND	ND	*P. carini* not deleted
4	ND	ND	ND	ND
5	ND	*E. coli, Klebsiella*	*E. histolytica, Ascaris*	ND
6	ND	*E. coli,* Vibrios	*Ascaris*	ND
7	ND	*Salmonella cholerasuis*	ND	ND
8	ND	*E. coli, Proteus Citrobacter*	ND	ND
9	ND	*Proteus mirabilis*	ND	ND
10	ND	*E. coli, Hagmia* spp	*Ascaris*	ND
11	ND	ND	ND	ND
12	ND	ND	ND	ND
13	ND	ND	ND	ND
14	ND	ND	ND	ND
15	ND	ND	ND	ND
16	ND	ND	ND	ND
17	*S. pneumoniae*	*E. coli*	ND	ND
18	beta hemolytic Strep	*E. coli, Enterobacter*	ND	ND
19	ND	ND	ND	ND
20	non-hemolytic Strep	*E. coli, Enterobacter*	*Ascaris*	ND
21	ND	ND	ND	ND
22	ND	ND	ND	ND

ND = not done

identified in stools were *Entamoeba histolytica, Ascaris lumbricoides,* hook worms and *Trichuris trichura. Pneumocystis carinii* was not detected in three sputum specimens examined.

Antibodies to *Candida, Histoplasma, Aspergillus, Coccidioides* and *Blastomyces* were tested in all patients; none were positive.

DISCUSSION

The clinical data of the study indicated that the predisposing conditions of our series are different from western series (Spivak *et al,* 1984; Pape *et al,* 1983), where homosexuality tops the list. In our series IVDU is the commonest factor. This difference was anticipated as the cultural and sexual behavior of our people is quite different from westerners. The pattern of hematologic abnormalities was similar to the review of the hematologic data provided in 75 published case reports (Spivak *et al,* 1984). However, our collections have more cases of anemia and fewer patients with leukopenia and lymphopenia. Study of six homosexual men with kaposi's sarcoma (Abrams *et al,* 1984) showed anemia in 66.6%, leukopenia in 83.3%, lymphopenia in 66.6%, and thrombocytopenia in 66.6%. In our series, the corresponding data were 100%, 27.3%, 36.4% and 40.9%, respectively. Review of hematologic manifestations of HIV (Zon and Groopman, 1988) showed that decreased peripheral blood counts were found in the earlier clinical stages of HIV infection before frank AIDS, but at a lower frequency. They also studied the trend of frequencies of low blood counts in the

populations with HIV seropositivity, AIDS related conditions, AIDS/Kaposit's sarcoma. When compared with their data, our cases fall into the AIDS related conditions with a higher percentage of anemia, lymphopenia and thrombocytopenia. This in accordance with our case selection, since we tested HIV seropositive hospitalized patients.

The ESR was raised in 50%. Among many factors which can produce increased ESR, infections and anemia were the most important in these patients.

HBsAg was positive in 14% of our patients. Bodsworth *et al* (1989) reported HIV seropositivity in 55% of hepatitis B virus infected people.

On bacteriological and parasitological examination, common pathogens like *Plasmodium falciparum P. vivax, Mycobacterium tuberculosis, E. coli,* Vibrios, *Salmonella, Streptococcus* and *Entamoeba histolytica* were the most common organisms isolated. This may be due to the prevalence of these organisms in the environment so that our patients succumbed from secondary infections before being infected with opportunistic organisms. Fleming (1990) reported that the acquired immune deficiency syndrome (AIDS) was fundamentally the same in all parts of the world, but the prevalence of microorganisms in an environment governs the patterns of disease arising from reactivated latent infections, invading pathogens and opportunistic infections. In Africa, tuberculosis is a common complicating infection in AIDS patients and infection by atypical Mycobacteria is rare. *Pneumocystis carinii* pneumonia is the commonest presentation of AIDS in north America and Europe but is rare in Africa. Salmonellosis in San Francisco has been reported as 14% and a higher incidence was expected in tropical countries. Nunn *et al* (1990) reported that tuberculosis is one of the major diseases associated with HIV infection and AIDS in developing countries and in disadvantaged groups in the northern hemisphere. 60% of Haitian patients with AIDS in south Florida had tuberculosis, as did 33% of AIDS patients in Africa.

Gilks and Ojoo (1991) studied HIV infected adults in Nairobi, Kenya. They did not find opportunistic infections even in chronic end-stage or full-blown AIDS cases and suggested three clinical stages could be identified in the tropics: Stage 1 is the asymptomatic stage with clinically inapparent HIV infection without features of HIV related immunosuppression. However, reactivated adult pulmonary tuberculosis and pneumonia caused by *S. pneumoniae* are commonly detected. In stage 2, there are features of immunosuppression and patients typically presented with generalized lymphadenopathy, widespread pruritic maculopapular rash, oral candida, oral hairy leukoplakia and scars from herpes zoster. In stage 3 or late disease they presented with wasting and chronic symptoms, and with chronic watery diarrhea caused by *Cryptosporidium parvum* and *Isospora belli.*

Thus it is clear that the clinical presentation and the complicating etiological organisms are different from one geographical region to another and each country should have its own clinical and laboratory classification.

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