INCREASING NUMBERS OF AIDS CASES,
MOSTLY CAUSED BY HIV-1 INFECTION, IN DAKAR (SENEGAL)

by

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Introduction

In Africa AIDS was first recognized as a major health problem in Central and East African countries (1). The HIV/AIDS epidemic is now also spreading rapidly to West Africa (3,4). In Côte d'Ivoire the situation is nearly as serious as in certain Central or East African countries (4).

In Senegal, in seroprevalence studies among asymptomatic pregnant women, blood donors and prostitutes the majority of the HIV infections are HIV-2 infections (3). On the other hand, among people with AIDS more are infected with HIV-1 infection than HIV-2 infection (3). The present study shows that, since 1986, in Dakar the number of AIDS cases is increasing every year and that AIDS in most patients is caused by HIV-1 infection.

Patients and methods

All HIV enzyme-linked immunosorbent assay (ELISA) seropositive patients meeting the World Health Organisation (WHO) clinical AIDS case definition criteria who were hospitalized between January 1986 to June 1993 at the Infectious Diseases Department at Fann Hospital, Dakar, Senegal, were enrolled in a retrospective study.

HIV-1 and HIV-2 Western blots were performed when available on sera of a limited number of patients.

Medical records of all Western blot confirmed cases were reviewed for basic demographic information, risk factors for HIV infection, sexually transmitted diseases and travel history.

Chi-Square and student's t-test were used for statistical analysis.
Results

Between January 1986 and June 1993 at the Infectious Diseases Department at Fann Hospital 796 patients with HIV ELISA positive AIDS were hospitalized (Table 1).

| Table 1 |
|-----------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Number (%) of AIDS patients hospitalised at Fann Hospital, Dakar, Senegal, since 1986. |  |  |  |  |  |  |  |  |
| HIV-1 (+) | 5 (83 %) | 15 (55 %) | 22 (61 %) | 30 (73 %) | 7 (83 %) | 73 (70 %) | 20 (67 %) | 10 (71 %) |
| HIV-2 (+) | 1 (17 %) | 8 (30 %) | 7 (19 %) | 8 (20 %) | 1 (13 %) | 23 (23 %) | 7 (23 %) | 3 (23 %) |
| HIV-1/HIV-2 (+) | 0 | 4 (15 %) | 7 (19 %) | 3 (7 %) | 0 | 7 (7 %) | 3 (10 %) | 1 (8 %) |
| ELISA (+) AIDS cases** | 6 | 29 | 36 | 52 | 98 | 224 | 236 | 115 |
| Western Blot confirmed | 6 | 27 | 36 | 41 | 8 | 103 | 30 | 14 |

* January 1993 - June 1993
** Not confirmed by Western Blot

Of the two hundred and sixty-six Western blot confirmed AIDS patients 198 (74.4 %) were men and 68 (25.6 %) women. The mean age of these patients was 35 years, ± 9.61 SD (range 1-76 years). Most patients (76 %) belonged to the 20-39 year old age group.

HIV-2 infected individuals were statistically significantly older, 39 years, ± 9.95 SD than HIV-1 infected patients [mean age 33 years, ± 9.17 SD (p<0.05)]. The male to female sex ratio was 3.2 for HIV-2 and 2 for HIV-1 infected patients.

Hundred and eighty-three (68.7%) of the patients were HIV-1 seropositive, 58 (21.9 %) HIV-2 seropositive and 25 (9.4 %) had sera who were dually reactive to HIV-1 and HIV-2.

Hundred and six (40 %) were married monogamously, 26 (9.8 %) were married polygamously, 90 (33.8 %) were single, 26 (9.6 %) were divorced and 18 (6.7%) were widow(er)s.

Hundred and ninety-six (73.6 %) acquired HIV infection through heterosexual contact, 11 (4.2 %) through homosexual/bisexual contact, 8 (3.1 %) because of a blood transfusion, 7 (2.7 %) because of IV drug use, 3 (1.1 %) because of vertical transmission, in 40 (15 %) of the patients, the risk factor for acquiring HIV infection was unknown. Eight (3%) were female prostitutes.

A history of traveling to another African country during the past 5 years was reported by 199 (71 %) of the patients and more often by HIV-1 seropositive patients 151 (82.5 %) or patients with serum dually reactive to HIV-1 and HIV-2 22 (88 %) than patients with HIV-2 infection 26 (44.8 %) (p < 0.001).

Hundred and seventy-three (65 %) reported a history of another sexual transmitted disease (STD). Hundred and fourteen (42.8 %) reported a history of urethritis, 50 (18.8 %) a history of genital ulcer, 1 (0.4 %) a history of
condyloma, in 8 (0.3%) the nature of the STD was not precised. Men more frequently reported an STD [143 (72.2%)] than women [30 (44.1%), (p < 0.001)].

Discussion

This study shows that since 1986 the number of AIDS cases hospitalized at the Infectious Diseases Department at Fann Hospital, Dakar, Senegal, progressively increased. December 1993, Senegal has reported 1,193 AIDS cases to the WHO. The HIV epidemic is now a reality in Senegal. Similar risk factors for HIV infection were observed among AIDS cases in Dakar as in other parts of Africa.

While HIV-2 infection is still more prevalent in Senegal than HIV-1 infection, the majority of AIDS cases in Dakar are caused by HIV-1 infection. This study confirms the observation made in other studies in West Africa, that HIV-1 is more infectious (5,6), more pathogenic (7,8) and spreading more rapidly (2,4), than HIV-2 infection.

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REFERENCES