HIV/AIDS among Surgical Patients in Butare University Teaching Hospital.

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Background: Despite the increasing number of patients with the human immunodeficiency virus (HIV) infection particularly in Sub-Saharan Africa, surgical experience with these patients remains limited. A prospective review of 165 surgical patients admitted over a period of 3 months from 20th September to 20th December 2006 was undertaken. The main objective of the study was to determine the frequency HIV among these patients and associated surgical conditions.
Methods: This 3-months prospective study was undertaken at Butare Teaching Hospital Rwanda over a 3-months period starting from 20th September 2007. A total of 165 patients who after counseling gave an informed consent had their blood collected for HIV screening. Data obtained was analyzed using Epidata and SPSS 11.5. P value was P value equal to 0.05 or less was considered as statistically significant.
Results: The patients' ages ranged from 6 to 86 years with a mean of 35.2 years. The sex ratio M: F was 2.11:1. The HIV seroprevalence was 6.7%. The majority of HIV positive patients were female (54.5%) and the most affected age range was 30-39 years. Only 2 (22.2 %) affected patients were on ARV therapy. Eight of the HIV patients had musculoskeletal sepsis (72.72 %). Associated surgical diseases included infection of osteosynthetic material in, chronic osteomyelitis, Pyomyositis and osteonecrosis of the head of femur associated with pyomyositis.
Conclusion: With a prevalence of 6.6%, HIV/AIDS is a real and significant problem in surgical practice and patients with HIV admitted to a surgical department require special consideration if their surgical management is to be effective. Surgeons and other health-care workers who are potentially exposed to blood and body fluids must take appropriate precautions to avoid getting infected with HIV. We found no statistically significant difference in the surgical pathologies between HIV-positive and HIV-negative patients.

Introduction

HIV pandemic is, in Rwanda, a public health problem as well as a development challenge for a population of around 8.5 millions. It is globally a problem for many reasons: no efficient treatment is available and no vaccine. The progression of HIV is associated with by a high mortality and an elevated prevalence of illnesses which, once, were eradicated. Let notice the increased risk of contamination for the medical and paramedical personnel especially in the traumatology. With an HIV prevalence of 5% in Rwanda[1] and despite the efforts used from 20 years ago, the HIV epidemic continue to progress throughout the national territory and go deep in rural areas where more than 90% of our population stay, non educated for the majority, and depending on agricultural activities.

Patients and Methods

This was a prospective study undertaken at Butare Teaching Hospital in Rwanda. The study population consisted of 165 surgical patients who had been hospitalized and operated in the Department of Surgery from 20th September 2006 to 20 December 2006 and had been counseled and given an informed consent for inclusion. Blood samples were collected for HIV screening. Data entry was done using Epidata and analysed using SPSS 11.5. P value equal to 0.05 or less was considered as statistically significant.

Results

Table 1. Distribution according to age group.

AGE in years	Frequency	%
6-19	42	25.45
20-29	31	18.78
30-39	33	20.0
40-49	17	10.3
50 and above	42	25.45
TOTAL	**165**	**100.0**

Table 2. Distribution of Serology According to Surgical Pathology

	HIV Test		
Surgical Condition	**Positive**	**Negative**	**Total**
Aseptic osteo-articular	2 (18.2 %)	90 (58.4%)	92 (55.8 %)
Septic osteo-articular	8 (72.7%)	44 (28.5%)	52 (31.5 %)
Abdominal	0	8 (5.2 %)	8 (4.9 %)
Anorectal	0	1 (0.6%)	1 (0.6 %)
Urogenital	0	6 (3.9 %)	6 (3.6%)
Others	1(9.1 %)	5 (3.3 %)	6 (3.6%)
Total	**11(100.0 %)**	**154 (100.0%)**	**165(100.0%)**

The Patients' ages ranged from 6 to 86 with a mean of 35.2 years. Table 1 shows the age distribution. There were 112 (67.9%) males and 53 (32.1%) were females. Eighty-three (50.3%) were married, 64 (39%) were single, 6 (4%) were widowed and 12 (7%) were children.

Of the 165 surgical patients, 11 (6.7%) were HIV positive. Only two of the 11 were already on Highly Active Antiretroviral Therapy (HAART). Six (54.5%) of the HIV positive patients were females. Eight of the eleven patients with HIV infection had septic osteo-articular pathology. Thee of the 8 with septic osteo-articular conditions had infected osteo-synthetic materials while 2 cases had chronic osteomyelitis of tibia, 2 had pyomyositis at the level of the thigh and leg respectively. One patient had pyomyositis of the whole lower limb associated with avascular necrosis of the head of femur. [Table 2].

Discussion

Our study involved 165 patients hospitalized in surgical ward of BUTH. Male were slightly more than female. The male predominance was previously reported by Boukinda et al[2] in Brazzaville and Cacala et al[3] in South Africa. In this study, a sero-positive rate of 6.7% was observed. This prevalence is slightly higher compared to the 2005 National HIV prevalence of 5% in the Rwandese population[1]. It is however much lower than the 39% and 20.9% reported by Cacala et al[3]

in Brazaville and Boukinda et al[2] in South Africa respectively.

In this study, the females were slightly more affected by HIV than males but the difference was not statistically significant (p=0.097). Cacala et al[3] in South Africa, had found a predominance of males with a male to female sex ratio of 4.4 to1. Boukinda et al[2] in South Africa found also that males were most affected by HIV with a similar sex ratio of 4.4:1. Traoré et al[4] Ouagadougou also found a predominance of males with a sex ratio of 4.3 to 1. Bahebeck et al[5]. in Cameroun found a male to female sex ratio of 1.58 to1. The explanation for the higher frequency of HIV in males may be to their main bread earner in a family and are therefore likely to leave their homes in search of employment and consequently more at risk of getting involved in casual relationship with sex workers. In our study, the majority of infected patients were unemployed.

In this study, the 30-39 years age group had the highest risk of HIV infection. The majority of those infected were jobless. Traoré et al[4] in Ouagadougou had similar findings with 31.25 % being in this age category. In their study, they reported that 37.5% of their HIV infected cases were jobless.

In this study, we found that HIV positive patients were most likely to suffer from septic osteo-articular pathology and pyomyositis. Traoré et al[4] in Ouagadougou have found the association of HIV and septic osteoarticular pathologies like chronic osteomyelitis and osteoarthritis of the head of femur. However, Boukinda et al[2] in Brazzaville found urogenital pathological conditions to be most predominant in HIV positive patients followed in Surgical wards.

Conclusion

At the end of this study, we have concluded to the following:

- HIV infection is a real problem in Surgery considering the prevalence of 6.7% found.
- With this prevalence, the occupational hazard of exposure to HIV infection is real and therefore protective measures must be taken by all health workers.
- We did not found any statistically significant difference between HIV positive and HIV negative patients in their surgical pathologies. This may be because our number was small. It is therefore difficult to attribute those pathologies to the HIV infection.

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