



Prevalence of Opportunist Infections among the Professionals Sex Workers and Their Customers Living with the VIH under ARV in Kinshasa

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Abstract

Context: The Human Immunodeficiency Virus (HIV) is the causal agent of the Acquired Immunodeficiency Syndrome (AIDS). Professional Sex Workers (PSW) are regarded as being at a very high risk of transmission of the VIH and Opportunist Infections. **Objective:** To determine the prevalence of the opportunistic infections associated the VIH/AIDS on PSW under ARV treatment in Kinshasa. **Methods:** The present study was carried out at the IST Matonge center in Kinshasa. It was a retrospective study on patients' files of adult PSW and their clients living with HIV, followed in this medical treatment center from 2006 to 2014. This work included all the files of adult PSW older than 18 years living with HIV followed from 2006 to 2014 in the selected center. Parameters of interest were: age, gender, HIV status, documented opportunistic infections and conditions. The files which did not contain all of the data mentioned above were not included. **Results:** Eighty-eight (88) files were retained according to the criteria. There were 53 women (60.2%). The most represented age group was the one from 36 to 45 years with 31.8%, followed by that of 26 to 35 years (26.1%), 46 to 55 years (22.7%), 56 to 65 years (10.2%), and that of 18 to 25 years (8.0%). The most diagnosed and recorded opportunistic infection was the Oral Candidiasis with 15.8% of cases; followed by non-specific Sexually Transmitted Infections (STI) with 14.3%, Malaria with 12.1%, Dermatitis with 8.1%, Tuberculosis (TBC) and Shingles with 6.2% respectively. **Conclusion:** Oral candidiasis (15.8%) was the most com-

mon Opportunistic Infection diagnosed among Professional Sex Workers followed at the “IST Matonge Center” in Kinshasa. The profile of OIs among PSWs living with HIV is different from that of general population.

Subject Areas

HIV, Public Health

Keywords

Opportunistic Infection, Professional Sex Worker, ARV, VIH, Kinshasa

1. Introduction

The Human Immunodeficiency Virus (HIV) is the causative agent of the Acquired Immunodeficiency Syndrome (AIDS) [1] [2]. This Immunosuppression determines the mortality and morbidity of infected patients by exposing them to frequent and often serious Opportunistic Infections (OI) [2]. These infections can be of bacterial, viral, parasitic, fungal or other origins [2] [3]. Other than immunosuppression, the occurrence of opportunistic infections depends on several other factors including the environment, hygiene and pathogens [2] [3].

In Sub-Saharan Africa, which is the region most affected by HIV infection, the number of studies on HIV and HIV-related infections conducted over the past 25 years is very insufficient compared to those conducted in Europe and other developed countries across the world [2]. In most countries heavily affected by the AIDS epidemic, Professional Sex Workers (PSW), are considered to be a population at very high risk of HIV transmission [4]. The prevalence of HIV among PSW is higher than in the general population [4]. In sub-Saharan Africa, it was estimated at 19% in 2008, compared to 5.2% among people aged 15 to 49 [5]. Often, it is within this highly exposed population that infection initially spreads before spreading to other segments of the population [6].

In the Democratic Republic of Congo (DRC), OIs are still a major problem in the care and follow up of People Living with HIV (PLHIV) [2]. In different centers, this follow up is often limited to the distribution of drugs and treatment of OIs [2]. Some studies have shown that Tuberculosis, Candidiasis, Pneumonia and Malaria are the most common infections in Kinshasa’s population [7]-[11]. Global care and follow up should take into account OIs whose diagnoses are still incomplete in our environment [11]. The objective of this study was to determine the prevalence of opportunistic infections among HIV infected Professional Sex Workers followed at the STI Matonge Center in Kinshasa.

2. Methods

2.1. Study Framework

The present study was carried out at the IST Matonge center in Kinshasa. It was

a retrospective study on patients' files of adult PSW and their clients living with HIV, followed in this medical treatment center from 2006 to 2014.

2.2. Patients

This work included all the files of adult PSW older than 18 years living with HIV followed from 2006 to 2014 in the selected center. Parameters of interest were: age, gender, HIV status, documented opportunistic infections and conditions. The files which did not contain all of the data mentioned above were not included.

2.3. Data Analysis

Data were collected using previously tested survey forms. They were entered on Windows Excel version 2007.

2.4. Operational Definition

Any infection caused by the immunosuppression, diagnosed by the clinical examination recorded on the HIV patient files, was considered to be an Opportunistic Infection. The infections were confirmed by a series of 3 Immuno-chromatographic Tests according to WHO recommendations. Anyone who has made sexual practice a source of official remuneration has been considered a PSW.

2.5. Ethical Consideration

The study received the authorization from the selected center. The confidentiality of the files of HIV-positive PSW was respected.

3. Results

Eighty-eight (88) files were retained according to the criteria. There were 53 women (60.2%) and 35 men (39.8%) included; giving a sex ratio of 1.5: 1. The most represented age group was the one from 36 to 45 years with 31.8%, followed by that of 26 to 35 years (26.1%), 46 to 55 years (22.7%), 56 to 65 years (10.2%), and that of 18 to 25 years (8.0%). **Table 1** presents the above results.

The most diagnosed and recorded opportunistic infection was the Oral Candidiasis with 15.8% of cases; followed by non-specific Sexually Transmitted Infections (STI) with 14.3%, Malaria with 12.1%, Dermatitis with 8.1%, Tuberculosis (TBC) and Shingles with 6.2% respectively. **Table 2** presents all the diagnosed Opportunistic Infections in the population.

4. Discussion

The objective of this study was to determine the prevalence of opportunistic infections among HIV infected Professional Sex Workers followed at the "Center IST Matonge" in Kinshasa, Democratic Republic of Congo.

Based on the inclusion criteria, out of 103 consulted, 88 files were selected. This is because there were unidentified and poorly kept records of PSWs in the center. This observation has been made by other studies in our environment [8].

Table 1. Frequencies of age by gender.

AGE	MALE		FEMALE		TOTAL	
	N	%	N	%	N	%
18 - 25	2	5.7	5	9.4	7	8.0
26 - 35	8	22.9	15	28.3	23	26.1
36 - 45	10	28.6	18	34.0	28	31.8
46 - 55	9	25.7	11	20.8	20	22.7
56 - 65	5	14.3	4	7.5	9	10.2
66 et plus	1	2.9	0	0.0	1	1.1
Total	35		53		88	

Table 2. Opportunistic Infections diagnosed.

Opportunists Infection	MALE		FEMALE		TOTAL	
	N	%	N	%	N	%
Vaginal pruritus	0	0.0	15	8.7	15	5.5
Vaginitis	0	0.0	11	6.4	11	4.0
Pulmonary TBC	1	1.0	1	0.6	2	0.7
Sexually Transmitted Infection	19	19.0	20	11.6	39	14.3
Oral candidiasis	16	16.0	27	15.6	43	15.8
Simple Herpes	0	0.0	1	0.6	1	0.4
Dermatitis	9	9.0	13	7.5	22	8.1
Shingles	10	10.0	7	4.0	17	6.2
Malaria	13	13.0	20	11.6	33	12.1
Tooth decay	0	0.0	2	1.2	2	0.7
Diarrhea	3	3.0	3	1.7	6	2.2
Urinary tract infection	2	2.0	1	0.6	3	1.1
Genital mycosis	3	3.0	7	4.0	10	3.7
Pneumonia	3	3.0	4	2.3	7	2.6
Skin pruritus	2	2.0	4	2.3	6	2.2
Bullous rash	2	2.0	0	0.0	2	0.7
Typhoid fever	1	1.0	1	0.6	2	0.7
Skin rash	1	1.0	5	2.9	6	2.2
Genital rash	1	1.0	0	0.0	1	0.4
Erythematous condyloma	1	1.0	3	1.7	4	1.5
Facial lymphadenopathy	0	0.0	1	0.6	1	0.4
Filariasis	0	0.0	1	0.6	1	0.4
Infected scabies	0	0.0	4	2.3	4	1.5

Continued

Intestinal Parasites	0	0.0	0	0.0	0	0.0
Cortical mycosis	1	1.0	0	0.0	1	0.4
Herpes Zoster's	3	3.0	2	1.2	5	1.8
TBC	6	6.0	11	6.4	17	6.2
Rhinitis	3	3.0	9	5.2	12	4.4

The female sex is dominant compared to the male sex in this population, 53 women (60.2%) and 35 men (39.8%); thus giving a sex ratio of 1.5:1. This confirms the trends published in our community, which feminize HIV infection in the adult population [8] [9] [10] [11]. This is justified by the fact that among adults, the country's health policy requires women to be screened, especially during Pre-Natal Consultations (PNC), where screening is done systematically immediately after admission to the center. On the other hand, the PSW status is mostly and officially female in our mist.

The most represented age group was the one from 36 to 45 years with 31.8%, followed by that of 26 to 35 years (26.1%), 46 to 55 years (22.7%), 56 to 65 years (10.2%), and that of 18 to 25 years (8.0%). These results are correlated with other studies published in Kinshasa [8] [9].

In this study, the Opportunistic Infections (OI) diagnosed in the population of HIV positive PSWs followed at the "IST Matonge" in Kinshasa were as followed: Oral Candidiasis with 15.8% of cases, followed by non-specific Sexually Transmitted Infections (STI) with 14.3%, Malaria with 12.1%, Dermatitis with 8.1%, Tuberculosis (TBC) and Shingles with 6.2% respectively, Vaginal pruritus with 5.5%, Rhinitis with 4.4%, Vaginitis with 4.0%, Genital mycosis with 3.7%, Pneumonia with 2.6%, Diarrhea, Skin pruritus and Skin rash with 2.2% respectively, Herpes zoster' with 1.8%, Erythematous condyloma and Infected scabies with 1.5% respectively, Urinary tract infection with 1.1%, ended with Pulmonary TBC, Simple Herpes, Tooth decay, Bullous rash, Typhoid fever, Genital rash, Facial lymphadenopathy, Filariasis, Cortical mycosis with all less than 1%. These OI are commonly diagnosed in the HIV infected population in our mist [3] [4] [5] [11]. However, the prevalence is very different due to the specificities of the PSW population. Therefore, the OI among People Living with HIV (PLHIV) should not be correlated to those among the PSWs population.

5. Conclusion

Oral candidiasis (15.8%) was the most common Opportunistic Infection diagnosed among Professional Sex Workers followed at the "IST Matonge Center" in Kinshasa; followed by non-specific Sexually Transmitted Infections (14.3%), Malaria (12.1%), Dermatitis (8.1%), Tuberculosis (6.2%), and Shingles (6.2%). Therefore, the profile of OIs among PSWs living with HIV is different from that of general population.

Conflicts of Interest

The authors declare no conflicts of interest.

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Abbreviation

AIDS	Acquired ImmunoDeficiency Syndrome
DRC	Democratic Republic of Congo
HIV	Human Immunodeficiency Virus
OI	Opportunistic Infection
PLHIV	People Living with HIV
PNC	PreNatal Consultation
PSW	Professional Sex Worker
STI	Sexually Transmitted Infection
WHO	World Health Organization.