apertus open access journals

Annals of Biomedical Studies

Open Access Research Article

Evaluation of the Oral Health of People Living with HIV in Kinshasa: Case of Saint Joseph Hospital (SJH)

Erick Ntambwe Kamangu[*1,2], Chancelvie Mpanga Nongo[3], Ben Ilunga Bulanda[2], Berry Ikolango Bongenya[2], Florent Baukaka Songo[3], Jacques Ileboso Bolenge[4], Mariano Manzo Lusakibanza[*5]

[1]Service of Molecular Biochemistry, Department of Basic Sciences, Faculty of Medicine, University of Kinshasa, Kinshasa-Democratic Republic of Congo.
[2]Research Group "Focus HIV/AIDS", Kinshasa-DRC.
[3]Service of Operative Dentistry, Department of Dentistry, Faculty of Medicine, University of Kinshasa, Kinshasa-Democratic Republic of Congo.
[4]Periodontology Service, Department of Dentistry, Faculty of Medicine, University of Kinshasa, Kinshasa-Democratic Republic of Congo.
[5]Department of Clinical Pharmacology, Faculty of Pharmaceutical Sciences and Faculty of Medicine, University of Kinshasa, Kinshasa-Democratic Republic of Congo.

Corresponding Author: Erick Ntambwe Kamangu: erick.kamangu@unikin.ac.cd, Service of Molecular Biochemistry, Department of Basic Sciences, Faculty of Medicine, University of Kinshasa, Kinshasa-Democratic Republic of Congo

Corresponding Author: Mariano Manzo Lusakibanza: mlusakibanza@gmail.com, Department of Clinical Pharmacology, Faculty of Pharmaceutical Sciences and Faculty of Medicine, University of Kinshasa, Kinshasa-Democratic Republic of Congo,

Received
9th April 2020

Accepted
15th June 2020

Available online
30th July 2020

Abstract

Background: Around the world, some stomatological manifestations are reported as conditions associated with HIV infection. These manifestations can be fungal, viral, bacterial, tumoral or even nonspecific mouth ulcers. These lesions are often early signs of uncontrolled HIV infection in both developed and developing countries.

Objective: The objective of this study was to evaluate the different stomatological manifestations in People Living with HIV in Kinshasa.

Methods: The present study was a retrospective study of patient records taken at Kinshasa's Saint Joseph Hospital (SJH) from January 2005 to December 2016. In an exhaustive manner, all available records of HIV positive patients supported in the institution during the collection period were considered. Only patients older than 18 years on the date of enrollment were included; patients on Antiretroviral Treatment (ART) as well as patients presenting stomatological manifestations during the treatment period without sex discrimination.

Results: Two hundred thirty (230) patients' files with stemmatological lesions were retained on 1028 HIV positive patients recorded in the center for the

survey period. One hundred fifty-nine (159) cases (69.1%) were female patients. The most represented age range was that of 34 to 41 years with 75 patients (32.6%). The most common stomatological manifestations before treatment were oral esophageal candidiasis (51.30%) and aphtosis (5.65%). After treatment, some manifestations such as aphtosis (15.2%), oral esophageal candidiasis (9.13%) and Xerostomia (8.69%) persisted in patients.

Conclusion: Oral candidiasis followed by aphtosis were the dominant oral manifestations in PLHIV at the beginning of antiretroviral therapy. With the treatment, the rate of candidiasis decreases while that of aphtosis increases considerably.

Keywords: Oral Health; PLHIV; HIV; Kinshasa

Abbreviations

ARV: Antiretroviral

SJH: Saint Joseph Hospital

PNLS: National HIV/AIDS control program

PLHIV: People Living with HIV

DRC: Democratic Republic of Congo

AIDS: Acquired Immunodeficiency Syndrome

ART: Antiretroviral Treatment, **HIV:** Human Immunodeficiency Virus.

Introduction

The infection with the Human Immunodeficiency Virus (HIV) remains, to this, day a major public health problem in the world and particularly in Sub-Saharan Africa which carries the heaviest burden [1,2]. Despite numerous interventions worldwide, HIV infection remains poorly controlled with high morbidity and mortality [1]. Access to Antiretroviral Treatment (ART) is still low due to a lot of obstacles linked to precariousness in certain areas [3].

Across the world, stomatological manifestations are also reported as conditions associated with HIV infection [4]. These manifestations can be of fungal, viral, bacterial, tumor or even non-specific mouth ulcers origin [4]. Besides their microbial origins, these lesions can also be caused by the undesirable effects of ART, smoking or a nutritional deficiency [5]. These lesions are often early signs of uncontrolled HIV

infection in both developed and developing countries [6].

This recent years, the prevalence of People Living with HIV (PLHIV) in adult population under 49 years old in Kinshasa, has remained less than 5% [7]. The Democratic Republic of Congo (DRC) counted 450 000 PLHIV or so in 2018, according to the United Nations Program on HIV/AIDS (UNAIDS) [8]. However, their management is essentially medicinal. There is very little data available about the associated stomatological lesions in our environment.

Thus, the aim of this study was to assess the different stomatological manifestations among PLHIV in Kinshasa.

Methods

Frame

This study was a retrospective one on files of patients followed at the Saint Joseph Hospital (SJH) in Kinshasa from January 2005 to December 2016. This center in the Mont-Amba district was selected at random from a database of health centers taking charge of the capital.

Study population

Exhaustively, all available files of HIV positive patients treated in the institution during the collection period were considered. Only the files of patients aged over 18 years old on the date of inclusion, patients on Antiretroviral Treatment (ART) as well as patients who presented with a stomatological manifestation during the duration of treatment without sex discrimination were included

Ethics

This work was in accordance with the ethical principles of biomedical research. Patient confidentiality was ensured by anonymity during data collection).

Results

A total of 230 files of patients with stomatological lesions were retained from 1028 HIV positive patients registered in the center for the survey period. One hundred fifty-nine (159) files (69.1%) were female patients, while 30.9% of the files were male patients. The most represented age range is that of 34 to 41 years with 75 patients (32.6%); followed by that of 42 to 49 years (22.6%), of more than 50 years (21.7%), of 26 to

33 years (17.4%) and of 18 to 25 years (5.6%).

The most frequent stomatological manifestations before treatment were mainly oral esophageal candidiasis (51.30%) and aphtosis (5.65%).

During ART, three situations were observed: (i) A regression of oral esophageal candidiasis (9.13%); (ii) An increase in aphtosis (15.2%); and (iii) A manifestation of oral dryness or Xerostomia (8.69%).

The Table-1 presents the data expressed above.

Parameters	Patients
Sex	
Women	159 (69.1%)
Men	71 (30.9%)
Age range	
18-25	13 (5.65%)
26-33	40 (17.39%)
34-41	75 (32.61%)
42-49	52 (22.61%)
+50	50 (21.74%)
Stomatological events before ART	
Aphtosis	13 (5.65%)
Oral esophageal candidiasis	118 (51.30%)
Genital herpes	1 (0.43%)
Periodontitis	2 (0.86%)
Kaposi's sarcoma	2 (0.86%)
Stomatological manifestations during ART	
Aphtosis	35 (15.2%)
Oral esophageal candidiasis	21 (9.13%)
Erythema	3 (1.3%)
Genital herpes	1 (0.43%)
Glossitis	1 (0.43%)
Periodontitis	5 (2.17%)
oral dryness/Xerostomia	20 (8.69%)

Discussion

The aim of this study was to assess the different stomatological manifestations among PLHIV in Kinshasa. In the Saint Joseph Hospital cohort, from January 2005 to December 2016, 230 files were retained for patients with stomatological lesions. The socio-demographic data of this cohort are similar to those found in our environment [9,10]. The predominance of female patients is recognized in the metropolises of Sub-Saharan Africa [11].

At the start of ART, oral esophageal candidiasis (51.30%) was the most common oral manifestation in People Living with HIV. Various authors have presented oral candidiasis as the most common stomatological condition during HIV infection [12-14]. It is presented as one of the reasons for screening for HIV infection because it is often caused by lowered immunity or overuse of antibiotics [14]. These two factors contribute to the imbalance of the oral flora thus favoring the occurrence of candidiasis. Aphtosis were present in 5.65% of cases of PLHIV at the start of ART in this cohort.

During ART, the rate of aphtosis in PLHIV was 15.2%, followed by oral candidiasis at 9.13% and oral dryness at 8.69%. The drop in the rate of oral candidiasis is explained by the fact that the latter is generally caused by a drop in immunity; while under ART, the immune system rebuilds, causing the disappearance of candidiasis. Xerostomia that appears during treatment can be compared to complications from ARVs.

Conclusion

Oral candidiasis followed by aphtosis were the dominant oral manifestations in PLHIV at the start of Antiretroviral therapy. With treatment, the rate of candidiasis decreases while that of aphtosis increases considerably. These results demonstrate the importance of stomatological monitoring of PLHIV to improve their management.

Conflict of interest

The authors declare that they have no conflict of interest in the publication of this work.

Acknowledgments

The authors thank the staff of the treatment center as well as the patients followed in this center.

References

1. ONUSIDA. Fiche d'information - Dernière statistiques sur l'état de l'épidémie de sida. 2018. Consulted on 08/09/2019 at 10am.
2. Fact Sheet on HIV disease / UNAIDS data 2019. Consulted on 29/10/2019 at 3pm.
3. Anna G, Joseph S, Cathy K, Linda GB and Landon Myer. Research article Implementation of community-based adherence clubs for stable antiretroviral therapy patients in Cape Town, South Africa. Journal of the International AIDS Society. 2015; 18: 19984.
4. Mpessa EM, Njifou NA, Lingom LD, Feuwou A, Njock LR et Ndjolo A. Manifestations ORL chez des Personnes Vivant avec le VIH/SIDA à l'Hôpital Laquintinie de Douala-Cameroun : Une Étude de 200 Cas. Health Sciences and Diseases. 2018; 19 (3): 64-68.
5. Mark Schweizer. HIV and Oral Health in the Era of Antiretroviral Therapy. U Health University of Miami (Miller School of Medicine). 2017.
6. Peacock ME, Arce RM, Cutler CW. Periodontal and other oral manifestations of immunodeficiency diseases. Oral Diseases (Leading in Oral, Maxillofacial, Head and Neck Medicine). 2016. https://doi.org/10.1111/odi.12584.
7. Kamangu E, Bulanda B, Bongenia B, Botomwito H, Mvumbi G, Mol P, Vaira D, Hayette M and Kalala R. Virological Profile of Patients Infected with HIV Starting Antiretroviral Treatment in Kinshasa. Open Access Library Journal. 2015 ; 2 (6) : 1-5. ID:68427. doi:10.4236/oalib.1101564.
8. ONUSIDA.https://www.unaids.org/fr/regionscountries/countries/democraticrepublicofthecongo. Consulted 28/03/2020 at 4pm.
9. Malve MC, John G et Stephen JC. Lésions buccales liées aux infections par le virus de l'immunodéficience humain ; Bulletin de l'OMS. www.google.com. Consulted on 08/02/2019 at 4pm.
10. Kamangu EN, Situakibanza NH, Mvumbi LG, Kakudj K, Tshienda TD and Mesia TG. Profiles of opportunistic infections in people

living with HIV followed at the Military Hospital of Kinshasa Reference (Camp Kokolo), DRC. Retrovirology. 2012; 9(1): P146.

11. Kamangu EN, Mavoko HM, Wapa-Kamangu CW and Situakibanza HN. Prevalence of Malaria Infection among People Living with HIV in Kinshasa. Open Access Library Journal. 2015: e1077. http://dx.doi.org/10.4236/oalib.1101077.

12. Boubacar B, Issa K, Drissa G, MBento GA, Amady C, Kadiatou K, Hapssa K, Alfousseyni T, Tiémoko DC, Mamadou LD et Sounkalo D. Affections bucco-dentaires associées à l'infection à VIH dans le service de maladies infectieuses du CHU de Point-G, Bamako. Med Buccale Chir Buccale. 2017; 23: 5-11.

13. Bissa H, Saka P, Adam S, Agoda P, Amevo K, Betenora B, Bouassalo M et Baglo F. Manifestations stomatologiques liées au VIH à Lomé. Open Access. 2017; 19 (1).

14. Diallo I, Sagna Y, Sondo KA, Somé S, Savadogo M, Poda A, Zoungrana J, Bognounou R, Guira O, Tieno H et Drabo YJ. Diagnostic tardif de l'infection à VIH chez les patients infectés par le VIH à Ouagadougou : circonstances diagnostiques, itinéraire thérapeutique et facteurs favorisants. CAMES Sante. 2016; 4 (2): 38-43.