



## ORAL PATHOLOGIES IN SUBJECTS LIVING WITH HIV (PLHIV) IN CHU-CAMPUS OF LOMÉ

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### ABSTRACT

**Objective:** Assess dental care needs of people living with HIV followed regularly at CHU Campus of Lomé.

**Methods:** This is a descriptive and prospective survey carried out on patients followed regularly, from January 1 to December 31, 2016.

**Results:** Our study involved 111 patients, 76.58% of whom were female. The most represented age group was that between 30 and 39 years old. Fourteen percent of patients had CD4>500cell/mm<sup>3</sup> and 44% was on stage II of the WHO. Mucosal lesions were more common in subjects with low CD4 counts. Periodontitis represented 77%, candidiasis 5%. Seventy-six percent of the subjects required oral care.

**Conclusion:** People living with HIV need really oral care.

The systematic management of oral care in subjects (PLHIV) should help improve their well-being and ensure them a more balanced life with their serological status.

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### INTRODUCTION

Oral health is an integral part of general health condition and is essential for quality life [1]. The oral mucous is fragile because it is easily exposed to bacterial, viral and mycological attacks which can lead to a change in its aspect. Certain systemic diseases such as diabetes, HIV infection or Crohn's disease lead to changes in the oral environment enabling the appearance of oral pathologies [2].

Oral lesions associated with HIV are among the first outward signs to show in people living with HIV, reaching prevalence rates ranging from 40 to 50% [1]. They can have diagnostic or predictive value and help control the evolution of infection in patients.

Several studies have described oral lesions associated with HIV infection, however very few of them have addressed the oral care needs of people living with HIV [3]. In Togo, studies targeting specifically and evaluative of the oral care needs of people living with HIV are non-existent. As a result, there is no real integration of oral health into the care system for people living with HIV.

This observation is the main target of this study, the general objective of which is to contribute to improving the access of PLHIV to quality oral care.

#### It's Particularly to

- ✓ determine the prevalence of various oral diseases in PLHIV;
- ✓ assess the oral care needs of PLHIV.

#### Patients and method

This was a prospective, descriptive study in the service of Odonto-Stomatology and of the center for the care of (PLHIV) of the CHU Campus of Lomé, from January 1 to December 31, 2018.

#### Critères d'inclusion / Inclusion criteria

Our study sample consisted of people whose retroviral serology is known to be HIV positive and regularly treated because of this status, and whose CD4 count was less than 6 months old and in permanent dentition.

The parameters studied were socio-demographic (sex, age, profession, residence) and clinical (clinical stage, individual CAD, prevalence of mucosal lesions, oral or para-clinical hygiene (CD4 count)).

#### Technique of data collection and analysis

Patients were recruited in the care and follow-up center for PLHIV at the CHU-Campus according to their care program. After an awareness session on the need for a clinical oral examination, informed consent was obtained beforehand following tripartite agreement with the patient and the caregiver at the care center for an odonto-stomatological consultation. For ethical reasons, the confidentiality rules of

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the study were required. The data collected was processed using Word and Excel software of Microsoft Office 2010. About fifteen patients contacted refused to participate in the survey.

**RESULTS**

Out of 762 (PLHIV) regularly followed, 111 were concerned by our study representing 15%.

Eighty-five subjects were female representing 76.58%. The sex ratio is 0.3. The ages of the subjects surveyed varied between the extremes of 12 and 63, and those between the ages of 30 and 49 were the most represented (65%)

From a professional point of view, subjects without permanent employment represented 52% followed by trades people (28%).

**Clinical data**

To their HIV status was added HBP in 19% of cases, diabetes in 2% of cases, and 20% used alcohol and tobacco.

**CD4 Count**

**Table I** Distribution of patients by CD4 count

CD4 count (/mm <sup>3</sup> )	Subjects	Percentage (%)
CD4 < 200	51	46
200 < CD4 < 500	44	40
CD4 > 500	16	14
Total	111	100

Fourteen percent of our patients had CD4>500cell/mm<sup>3</sup>

**Clinical stage**

Forty-four percent of patients reached clinical stage II of WHO Prevalence of oral mucosal lesions

**Table IV** Distribution of patients according to their oral state in relation to WHO clinical stage of each one

	Gingivitis	Mild Periodontitis	Moderate Periodontitis	Candidiasis	Leucoplasia	Cheilitis	Teeth decay
Stage I	1	9	2	1	0	0	13
Stage II	3	18	1	1	0	0	10
Stage III	0	37	2	2	0	2	11
Stage IV	4	14	2	1	1	0	9
Total n(%)	8 (7%)	78(71%)	7(6%)	5(5%)	1(1%)	2(2%)	43(38.74)

**Table V** Distribution of patients according to their oral state in relation to CD4 count

	Gingivitis	Mild Periodontitis	Moderate Periodontitis	Candidiasis	Leucoplasia	Cheilitis	Teeth decay
CD4<200	4	32	4	3	1	1	12
200<CD4<500	2	29	2	2	0	1	18
CD4>500	2	17	1	0	0	0	13

There were 33 cases of oral signs in patients with CD4 >500.

**Dental Care Needs**

**Table n°** Distribution of patients according to their dental care needs

Oral care needs	Number	Percentage
Teeth decay	9	8%
Dental treatment	2	2%
Periodontal treatment	23	21%
Mucosal care (drug treatment)	81	73%
Prosthetic care	5	5%
No care	18	16%
	21	19%
	15	14%

**Fifteen percent of patients did not require oral care.**

**Comments**

This study allowed us to establish the oral status of the population of people living with the acquired immunodeficiency virus in Togo, and to assess their needs in odonto-stomatological care. This was a static observation of the oral situation, without highlighting any causal links between the specific immunological status of these subjects and the pathologies thus listed, or their degree of evolution. It is one of the limits of this study which nevertheless has the merit, by evaluating the oral care needs of PLHIV in Togo, to bring out the problem of a odonto-stomatological concern necessary or even essential for their care and follow-up in order to guarantee to them more balanced lives compatible with their HIV status.

The optimal care of PLHIV in Togo, should integrate according to our study, the oral aspects of which the different socio-demographic and clinical factors are to be considered in the overall file of the patient.

This would thus be the case for the female predominance of our sample, which is only a reflection of the general epidemiological profile of HIV infection in Togo [4].

This predominance could be explained on the one hand by the large exposure of women to factors of risk of contamination of HIV and on the other by their greater motivation to participate in the various surveys. Our results are on this point, similar to those of neighboring Benin and Cameroon [5, 6].

The prevalence of dental and oral mucosal pathologies in PLHIV according to age groups would also be in line with the general trends affecting mainly young adults, the most represented in our study, between 30 and 39 years old (37%), and supporting most research works. These young groups are indeed more involved in practices with high risk of contamination by the AIDS virus [7,8 , 9 ].

At the clinical level, determinants reveal the exclusivity of the infection of our patients with HIV1, which is very widespread in West and Central Africa with carrier rates varying between 68% and 99%, both with children and adults [10, 11, 12, 13, 14 ].

The different prevalences of oral cavity pathologies especially mucosal one tend to evolve according to the clinical stage. Candidiasis was found at all clinical stages, with a peak with patients at stage III. The only diagnosed leucoplasia is in a subject at stage IV.

Studies with specific methods whose objective is to seek possible causal links between the recorded oral pathologies, their mode of evolution and the serological status would help better highlight the issue of oral diseases of the subject (PLHIV).

The highest prevalences of oral pathologies particularly mucosal in this study were found at a CD4 count below 200/mm<sup>3</sup>. This is the case of Periodontitis, Candidiasis, leucoplasia and Cheilitis. This result could give a particular meaning to the CD4 count as a significant determinant of the condition of the oral mucosa of the subject (PLHIV). The CD4

count was less than 200/mm<sup>3</sup> for 46% of our subjects. This result about the CD4 count is similar to those of most research works in Africa [13, 6 ]

The caries prevalence did not seem to have a perceptible link directly with the CD4 count and/or the clinical stage, just as some works in the literature had previously observed [15 ].

Due to their nature and prevalence, oral pathologies of (PLHIV) should deserve special attention in the process of their follow-up and treatment. Mucosal pathologies seem in their evolution to be more in line with their immunological status. Oral candidiasis which are recognized according to literature as the most frequent manifestations had a prevalence of 5% in this study [16, 17].

This low prevalence should be put into context due to the real in-taking of current ARVs by all of the subjects in our sample. The prevalence of these candidiasis tended to rise in stages of collapse of CD4 counts.

With regard to the pathological table, PLHIV therefore have a non-negligible need for periodontal, mucosal and dental treatments, and above all of a motivation for oral hygiene, necessary and essential to prevent the occurrence of opportunistic pathologies, in order to guarantee them a balanced life compatible with their immunological status.

## CONCLUSION

Paying more attention to oral care in all care and follow-up programs for people living with the AIDS virus (PLHIV) would help improve their health condition and well-being and ensure them a more balanced lives, compatible with their HIV status.

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