

Stomathological lesions in HIV-1 reactive patients: comparison of proportion in two independent populations

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SUMMARY

Prevalence of stomathological lesions notably changed after highly active antiretroviral therapy (HAART). This event is testified by international scientific literature. Purpose of this study is to diagnose and to register by statistic analysis HIV oral manifestations comparing in two independent populations.

Study Design: Stomathological lesions were diagnosticated in HIV/AIDS patients by the same oral specialist. They were attended in our Service during two observation periods (OP): 1988-1996 and 1997-2004, 12th hours/week and 6 hours/week respectively. Confirmation of clinic diagnoses was made by cytology, histopathology, immunohistochemistry and PCR, according to each pathogenesis. Both time's periods were compared for each pathology by "Comparison Method per Proportions" (independent munsters) with a signification level: $p < 0.05$. Data were processed with EPIDAT, version 3 (YUNTA OF GALICIA- OPS/OMS).

Results: OP1=2873 pathologies, OP2=520. Comparison in both OPs was: statistical signification $p < 0.05$: Eritematous and Pseudomembranous Candidiasis (EC),PSC), Hairy leukoplakia (HL), Recidivant aphtous ulcers (RAU), Angular Cheilitis (ACH), Papilloma Human Virus (HPV), Herpes Virus (HV), and Non-Hodking Limphoma (NHL). Withouth statistic significance: Acute necrotizing gingivitis (ANUG) and Kaposi Sarkoma. (KS). In the second OP, RAU, HPV and HSV showed significantly statistic differences, specially RAU with 44,2% of prevalence.

Conclusions: 1) Our results could confirm declining prevalence of most of oral manifestations of HIV infection in HAART era. 2) We stand out the significance of RAU, HPV and HSV prevalences in the last period of time.

Key words: Stomatological lesions, comparison of proportion.

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INTRODUCTION

During the last years highly active antiretroviral therapy (HAART) have produce very important

consequences on viral decrease replication in HIV-1 infected and ill patients. HIV RNA levels (viral load), morbidity and mortality scores achieved significantly improvements (1,2). From the beginning of infection

many oral mucosa manifestations had been detected as on annexes oral cavity organs as well. All of them were considered as infection predictors (3-7). Now a day, the landscape is changed according to the international bibliography (8,9). On patients from those countries where they receive cost- free antiretroviral medication, the incidence and prevalence of oral lesions have considerably diminish (10,11). Since 1996 new studies of orall lesions prevalence were performed according to the evolution and expectation of this pandemia.

Our **objectives** for this presentation were: to diagnose and to register from an statistic point of view the prevalence of oral lesions on HIV-1 patients comparing two different populations in two periods of time: pre and post HAART.

MATERIAL AND METHODS

There were analyzed two periods of time: 1988-1996, with 2873 registered lesions and 1997-2004 with 520. The first ones were diagnosed by the same consultant according the "First Simposium of AIDS investigation in Latin America and Caribe (OSM) Río de Janeiro, Brasil, 1988 and, the second one, according to "EC Clearing House Criteria on Oral Problems related to HIV infection" 1993.

Data were analyzed comparing two observations periods for each pathology applying the statistical study using the comparison method per proportions for independent samples with a signification level $p < 0.05$. Data were processed with EPIDAT, version 3.0. Xunta de Galicia OPS/OMS.

Results were tabulated and studied for both periods of time. EC erithematous candidiasis, PSC pseudomembranous candidiasis, HL, hairy leukoplakia, RAU, recurrent aphthous ulcers, ANUG, acute necrotizing gingivitis, KS, Kaposi sarcoma, HPV Human Papilloma Virus, HSV Herpes virus and NHL, Non Hodking Lymphoma were confirmed by clinic diagnoses, cytology, culture, histopathology, immune histochemistry and PCR for viral types. Clinic observation was made by the same observer during 12 hours/week, first period and 6 hour/week, the second one.

RESULTS

During the first observational period 2873 Oral lesions were diagnosed (319.2 (per year), while in second period 520 were identified (65 per year) (table 1).

Comparison of prevalences were registered as: RAU (44.2%), HPV 11.9% and HSV 8.3% in the second period with statistical significant differences ($p < 0.05$) (table 2).

This results can be observed more evidently on graphic data (1).

DISCUSSION

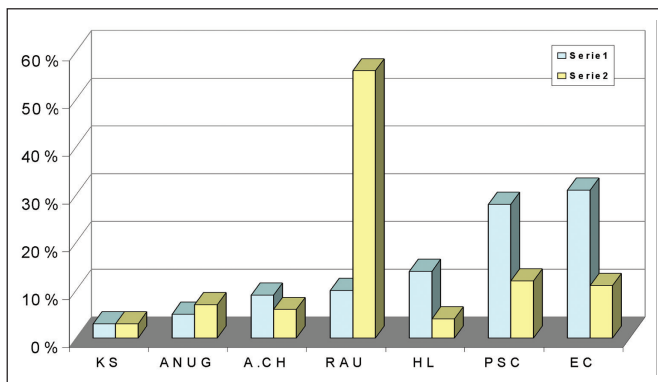
Participants of the "5th Workshop on Oral Health and Disease in AIDS" from 6 to 10 July 2004, Phuket, Tayland (13) accepted to analyze the recovering and improvement of oral lesions associated with HIV/AIDS

TABLE 1.- ORAL LESIONS IN TWO PERIODS: 1988-1996 AND 1997-2004

Lesions	1988-1996		1997-2004	
	Cases	%	Cases	%
Eritemathous Candidiasis	870	30.3	47	9.0
Pseudomembranous Candidiasis	775	27.0	51	9.8
Hairy leukoplakia	390	13.6	17	3.3
RAU	283	9.9	230	44.2
Angular cheillitis	241	8.4	24	4.6
ANUG	141	4.9	30	5.8
Kaposi Sarcoma	78	2.7	11	2.1
Human Papilloma Virus	60	2.1	62	11.9
Human herpes Virus	30	1.0	43	8.3
Non Hodking Linphoma	5	0.2	5	1.0
Total	2873	100	520	100

TABLE 2.- COMPARISON BETWEEN LESION. PERIODS: 1988-1996 AND 1997-2004

Lesions	Period 1 %	Period 2 %	Differences of proportions IC (95%)		Statistic Z	Value p
CE	30.3	9.0	0.18	0.24	9.98	0.000
PSC	27.0	9.8	0.14	0.20	8.33	0.000
HL	13.6	3.3	0.08	0.12	6.58	0.000
RAU	9.9	44.2	-0.38	-0.29	20.07	0.000
A.CH	8.4	4.6	0.16	0.60	2.86	0.000
ANUG	4.9	5.8	-0.031	0.014	0.71	0.470
K.S.	2.7	2.1	-0.009	0.021	0.63	0.520
HPV	2.1	11.9	-0.128	-0.069	10.95	0.000
HSV	1.0	8.3	-0.097	-0.047	10.28	0.000
NHL	0.2	1.0	-0.013	-0.003	2.6	0.011



Graphic 1. * $p < 0.005$. There are significant differences between both periods for those pathologies with*.

and to develop further meetings where might be discuss different subjects about Health Oral Conditions in relationship with HIV infection. With this purpose we have observed that the impact of antiretroviral drug combination treatments and investigations about HIV/AIDS pathogenesis since 1995 have contributed in the diminution of the incidence and prevalence of oral diseases (11, 16, 17). We can say that this is not the case of Zimbabwean (18) within 18.6% of KS and 3.8% of

Crancun Oris (that its not registered in our land), or South India (19) that have published from 300 patients, ANUG 47% and PSC 33%, or Nigeria were it is a great score of social stigma and discrimination, where do not exist a Public Health support on HIV infection and were it is observed also, that not exist an appropriated management for salivary gland lymphoepithelial lesions, commonly observed in children.

It's interesting that in spite of the HAART new era, there are some prospective studies that have shown really no benefit in short –term viral outcomes. The emergence of drug resistant viral variants presents a significant challenge to effective antiretroviral intervention. The themes that arise are patient adherence to medications, something that is a profoundly strong determinant of outcomes, both virology and clinical outcomes. Resistant associated mutations after multiple treatment failures, drug resistant viruses become more routine and widespread (21,22). Perhaps of this reason oral pathology has not decrease to 0% and we can yet observe patients with lesions that we believed they have been disappeared but they return in acute and morbid processes.

On the contrary, we have found that recurrent aphthous ulcers or major ulcers (RAU) and Human Papilloma Virus associated lesions in oral mucosa present highly statistic scores, specially the first ones.

Knowing the physio-pathogenesis of RAU (23) and the coincidence between our last results with the last publications from the two mentioned viral infections (24-28) in patients under HAART we ask ourselves if are we in a way of a new investigation field.

CONCLUSIONS

1. Introduction of new highly active antiretroviral therapy have given, as result, in our studied population, a significantly statistic reduction of lesions associated with HIV infection, in the analyzed period of time under HAART.
2. We point out as exception the high prevalence in HAART era of Recurrent Aphthous Ulcers (RAU) and with lower value but, with a statistic significantly difference, oral lesions caused by HPV and HSV as well.
3. We consider there are necessary further investigations to understand and recognized the most representative oral lesions associated with HIV/AIDS in the future.

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