

Research Article

Diagnosis of the Prevalence of Bruxism in HIV/AIDS Patients, Associated with Psychological Factors: Pilot Study

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- Bruxism
- Psychological aspects

Abstract

The Human immunodeficiency virus (HIV) is a pathology that caused a global pandemic, developing a series of social and psychological problems on the population like conflicts, preconception, self discrimination, anguish, depression, rejection, abandonment, social isolation, fear to die, etc. Being those cofactors of stress it can influence directly making some conditions worse like bruxism. This study contains a sample of 14 patients with positive HIV, a clinic exam followed by 15 questions about stress factors, habits and the influence of HIV on the patients life's. According to the research, 64,28% of the interviewed patients presented bruxism, a highest percentage comparing with the general population (8 to 21%), 9 patients (64,28%) with joint changes, joint blockage or dislocation was reported on 4 patients (28,57%) and only 2 were following the treatment. The bruxism patients, only 2 never had symptoms of HIV or medication, 2 reported thinking on the actual health condition and 7 think a lot, none of the patients that had never thought about their health condition had bruxism, 7 of 10 bruxist patients reported that think sometimes and 1 reported that think with frequency. It was conclude that the prevalence was higher on HIV patients when compared to the not HIV population. The psychological profile showed an influential factor, being worse on bruxist patients.

INTRODUCTION

Syndrome of Human immunodeficiency (AIDS) is caused by the Human Immunodeficiency Virus (HIV) that can be transmitted by sexual contact, blood and vertical contamination; affects mostly the immune system and nervous system making the clinic symptoms look like opportunistic infections; taking to the higher stage of AIDS disease [1,2].

The cure and vaccines to prevent AIDS hasn't being developed, although antiretroviral were discovered acting on inhibition of HIV replication, so the viral load stays lower and improves the immune system, with great benefit in reducing mortality and morbidity [3-6]. It's important to recognize the importance of multi professional treatment for those patients, with emphasis on dental and psychological treatment, since we know that there are sequela and psychological consequences.

It's possible to see psychological changes on the HIV/AIDS patients during all the phases since the suspected contamination

to the disease evaluation. Studies have shown that emotion changes happens because of the death possibility, fear, anxiety, uncertain prognosis, effects of medication, isolation and rejection; depression caused by lack of cure, self blame, and limits imposed by illness; anger and frustration, the inability to overcome the virus and the uncertainty of the future, guilt for the possibility and to have infected others involuntarily and obsessive problems due to concern about illness and death, and a tendency to avoid new infections [7].

Social unpreparedness often leads the HIV/AIDS sufferer to fell doomed to death, along with fear and distress, may contribute to increase stress. Stress can cause a change on the organism with the intention of adapting, causing degeneration of immune system, reaching even more the defense of those individuals [8-10]. As symptoms of stress we have depression, discouragement, apathy, emotional hypersensitivity, irritability, anger, anxiety and, in addition, we have contributing stress of various diseases [11-13].

Among the diseases that have stress as one of its contributing factors to the cause is bruxism. Bruxism is tooth contact in movements that are different from normal functions, and may be static or dynamic, usually during sleep and unconsciously [14]. The etiology is complex and multifactorial, often associated with emotional stress and occlusal problems or both. The psycho-emotional factor is related to a tendency of bruxist patients use their stomatognathic apparatus as a means of downloading aggressive feelings [15-16].

In the diagnosis of bruxism, we detected during the anamnesis an account of fatigue and muscular pain, the patient may report that it grinds the tooth at night and may complain of roughness or dental hypersensitivity. At the clinical exam, we can visualize dental wear, dental hypermobility without periodontal disease, dental or restorative fractures, hypertonicity of the masticatory muscles with pain in some points, headaches and may still have changes in the temporo-mandibular joint with pain and discomfort, Joint blockage, dislocation, subluxation, crepitation, noise, degenerative changes, limitation of opening and restriction of movement¹⁵.

This research is justified not only by the above, but also by the contribution in the studies on infectious diseases, and may help Dental Surgeons and institutions to include a psychological approach to patients with HIV/AIDS, as well as to diagnose the prevalence of bruxism early in this Population, relating to psychological factors.

METHODS

The present study was developed at the Center for the Study and Assistance to Special Patients (CEAPE) at the Clinic of Dentistry of the Paulista University, Campus Indianópolis - São Paulo, Brazil, that performs dental care for patients with infectious and contagious diseases. Data collection took place, after approval by CEPUNIP 642/99. The subjects of the research were individuals HIV/AIDS.

Inclusion criteria: HIV/AIDS patients without complications from their current state.

Exclusion criteria: patients on psychiatric treatment, those who administer muscle relaxants or corticosteroids.

The research was carried out in three stages:

- Presentation of the research, clarifications and agreement with the Term of Free and Informed Consent.

- Delivery of a questionnaire related to psychological factors, which the patient answered in a quiet and alone environment. This questionnaire was composed of 15 questions that included: demographic data (age, sex, skin color, family income and education level); Uncovered reaction to HIV diagnosis; Impact of medication; How much HIV prevents daily activities; Opinion about the health service in relation to the treatment; Count your current health condition; Symptoms; How much do you think about your health condition; Satisfaction with current health; Stress or sadness for health; preconception; quality of life; Satisfaction with sleep; Frequency of negative feelings, and

situations that cause you stress.

- Execution of a clinical examination directed to the diagnosis of bruxism and joint alterations, evaluating: custom of grinding or grinding of teeth; Chewing muscles; Jaw locking episode; click; Ladder of pain; Crackling; Mandibular mobility index; Tooth wear; Use of a device for bruxism and need for treatment.

Subsequently the data were analyzed and tabulated

RESULTS

The total sample consisted of 14 patients, 5 (35, 71%) of the female gender and 9 (64, 28%) of the male gender. Of this sample, as for race, 8 being considered as white, 5 as mulattos and 1 black. The mean age was 44.07 years old, being aged between 42 and 62 years of age.

The general and oral pathologies found in these patients were: Pneumonia; Candidiasis esophagus; Toxoplasmosis; Oral candidiasis; Cytomegalovirus; Herpes zoster; schizophrenia; Pulmonary metastasis and syphilis.

As for the CD4 count, only 1 interviewee had below 300 and for viral load, the majority (64, 28%) had undetectable load regarding the psychological aspects (Table 1) we obtained significant data: only 2 (14.28%) reported the finding as normal; 3 (21.42%) said they did not tell that they have AIDS for anyone, not even doctors and relatives; 10 (71.42%) have or already had symptoms; 8 (57.14%) reported thinking too much about their health condition; Only 1 (7.14%) never suffered prejudice; And 2 (14,28) reported never feeling negative feelings.

According to the survey, 64.28% of the interviewees presented bruxism (Figure1), with the patients: 1, 2, 3, 5, 8, 9, 10, 11 and 14. Of the bruxist patients, 8 had noise or crackling articular, in addition to 1 patients who presented these signs and did not have bruxism, in a total of 9 patients (64.28%) with joint alterations. A blockage or dislocation episode was reported in 4 patients (28.57%), 3 of them had bruxism and 1 didn't. On the bruxist patients, 5 reported pain, 8 had dental wear and only 5 received some type of treatment for bruxism, and only 2 were still on treatment, thus 7 needed treatment.

Relating the bruxist patients to the psychological aspects we had: Only 2 never had symptoms resulting from HIV/AIDS or medication; 2 reported thinking eventually about their health condition and 7 think a lot; Only 1 suffered prejudice more than once, the other 8 suffered a few times or never suffered; Regarding the quantity that thinks about their health condition (Chart 2) we have that none of the patients who never think has bruxism, 7 in 10 patients with bruxism reported that they think sometimes and 1 reported that they think often.

DISCUSSION

According to the results, the prevalence in HIV/AIDS patients is higher than in the general population. 64.28 % in the HIV/AIDS population and 8-21% in the general population, according to Brown and Hong [17,18].

Considering also that 8 had joint changes and 8 had dental

Table 1: Data obtained from the psychological questionnaire applied to HIV/Aids patients.

Pa-tients	Reac-tion to discovery	Impact of medi-cation	How much HIV pre-vents daily activi-tys	Health Service	For those who tell about their health	Symp-toms	How much do you think about your health?	Satis-faction with health	Stress or sad-ness by the con-dition	Pre-con-ception	Qual-ity of life	Sleep quality	Fre-quency of nega-tive feel-ings	Factorst-hat cause stress
1	Sur-prised	medium	Nothing	Good	Family and doc-tor	Already had	Verymuch	Satis-fied	-----	Few Times	Good	Satisfied	Some-times	Transit and Financial Problems
2	Took time toaccept	High	me-dium	Great	Family and doc-tor	Already had	Verymuch	----- ---	-----	----- ---	----- ---	-----	----- ---	Health con-dition
3	sur-prised	No im-pact	Nothing	Great	Family	Never	Verymuch	Satis-fied	-----	Few Times	Good	Satisfied	Some-times	Financial Problems
4	sur-prised	No im-pact	Ex-tremely	Good	Doctor	Never	Verymuch	Satis-fied	Many times	Many times	Good	Medium	Never	Transit and health con-dition
5	Took time toaccept	medium	Very few	Good	Family	Fre-quently	Verymuch	Partial-ly Satis-fied	Few Times	----- ---	Good	Satisfied	Some-times	Transit and health con-dition
6	Took time toaccept	medium	Very few	Good	Nobody	Already had	Notmuch	Satis-fied	Many times	Many times	Me-dium	Satisfied	Some-times	Family sickness
7	Took time toaccept	Low	Very few	Good	Family	Fre-quently	Verymuch	Satis-fied	Few Times	Many times	Good	Satisfied	Some-times	Health con-dition
8	Took time toaccept	medium	Very few	Good	Nobody	Already had	Notmuch	Satis-fied	Few Times	----- ---	Good	Insatis-feito	Fre-quently	Traffic, Fam-ily Illness, Home and Financial Problem
9	Took time toaccept	High	Nothing	Good	Everyone	Eventu-ally	Verymuch	Partial-ly Satis-fied	Few Times	Many times	Very-good	Partially Satisfied	Some-times	Financial Problems and social-izing with people
10	Normal	medium	Very few	Good	Nobody	Eventu-ally	Eventually	Satis-fied	Few Times	Few Times	Good	Partially Satisfied	Some-times	----- -----
11	sur-prised	No im-pact	Nothing	Great	Everyone	Never	Verymuch	Satis-fied	Never	Never	Good	Partially Satisfied	Some-times	Financial Problems
12	Normal	No im-pact	Nothing	Great	Everyone	Never	Eventually	Satis-fied	Never	Many times	Very-good	VerySatis-fied	Never	----- -----
13	Took time toaccept	medium	Nothing	Great	Family and doc-tor	Already had	Notmuch	Satis-fied	One Time	Few Times	Good	Satisfied	Some-times	Transit and Financial Problems
14	sur-prised	No im-pact	me-dium	Good	Family	Eventu-ally	Eventually	Partial-ly Satis-fied	Few Times	Few Times	Good	Satisfied	Some-times	Health con-dition

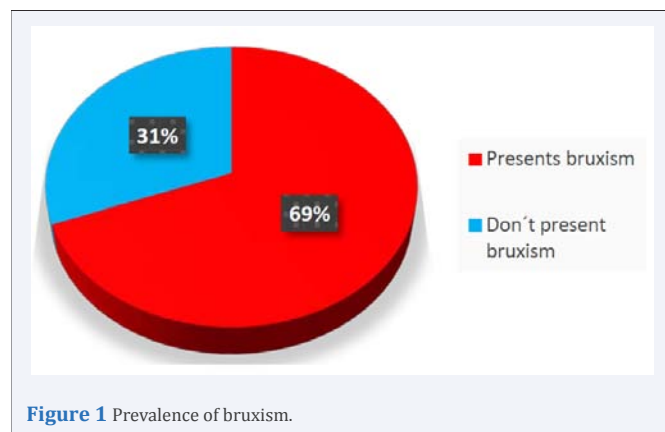


Figure 1 Prevalence of bruxism.

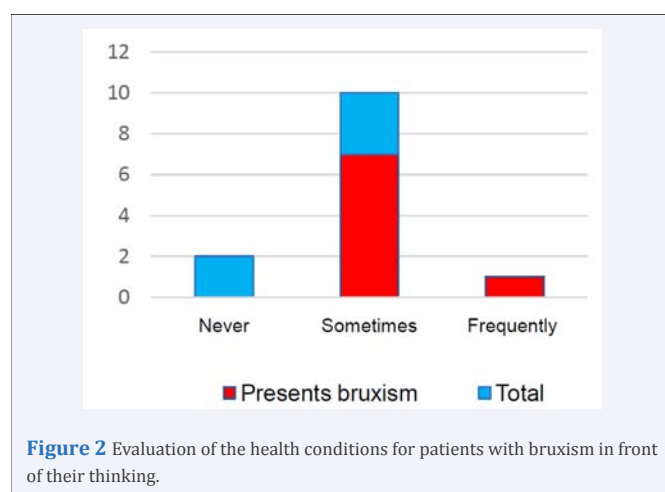


Figure 2 Evaluation of the health conditions for patients with bruxism in front of their thinking.

wear. Also, 7 needed treatment.

Knowing that the main damages caused by bruxism are: changes in the dentition, periodontium, masticatory muscles, temporo-mandibular joint, headache, behavioral and psychological effects [15,19,20-23], a different approach is required for The early diagnosis in patients with HIV/AIDS, before presenting the effects of the diseases, requiring more complex treatment.

In view of the psychological results, the importance of an intervention to this point is emphasized, since it is a population that has great emotional sequels, being important the motivation, valorization, bonding and humanization in all the treatment, also making it clear the necessity of amultiprofessional treatment, which is paramount to offer an integral service to these patients.

CONCLUSION

The prevalence of bruxism in HIV/AIDS patients is about 3 times higher than in the general population, which according to Brown and Hong is 8 to 21% and in HIV/AIDS patients is 64.28%. And the psychological pattern proved to be an influential and even more aggravating factor in patients with bruxism.

It is suggested that the Dental Surgeon, considering the high prevalence, can detect these contributing factors to bruxism during the treatment of HIV/AIDS patients and that makes the

diagnosis early and immediate treatment. And that still, can offer a multi professional treatment to aid in the psychological aspect of these individuals.

It is necessary to study larger samples to increase the results.

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