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Adherence to Antiretroviral Therapy in Patients with HIV / AIDS: Combination Therapy X Conventional Therapy

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1 Adherence to Antiretroviral Therapy in Patients with HIV / AIDS: Combination Therapy X Conventional Therapy

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3 ABSTRACT

Introduction: Low adherence to antiretroviral therapy (TARV) allows increased multidrug resistant viral transmission. **Objectives:** To evaluate the rates of adherence to combined antiretroviral therapy versus conventional antiretroviral therapy among patients diagnosed with HIV/AIDS. **Methods:** Cross-sectional study, conducted in Juazeiro Norte-CE, Brazil. Patients >18 years using TARV for 6 months were included. Data collection took place in 2016 through the instrument (CEAT-VIH), validated in Brazil by RemorMilner-Moskovics; Preussler2007. **Results:** The prevalence of adherence to TARV was 49 (66.2%), 44 (59.2%) had undetectable viral load and 55 (74.3%) had CD4 + >350 lymphocytes, corroborating the progression of clinical treatment results. **Conclusion:** The success of TARV depends on the strategy of adherence to the prescribed system. In this study, adherence to combined TARV proved to be higher than conventional antiretroviral therapy, and treatment with a reduced number of pills is likely to represent an improvement in patient quality.

Key-words: Adherence; Antiretroviral Therapy; HIV/AIDS.

Manuscript

4 INTRODUCTION

- 4.1 The Human Immunodeficiency Virus (HIV) causes Acquired Immunodeficiency Syndrome (AIDS) that affects the patient's immune system, allowing several types of opportunistic diseases¹. The development of antiretroviral therapies has given its users a reduction in the morbidity and mortality of people living with HIV / AIDS². AIDS is a global health problem that affects indifferently the population in different age groups and socioeconomic classes³. During 2015, in Brazil, 718 thousand people lived with HIV / AIDS⁴, and the populations most affected are those who use drugs, transgender women and homosexuals⁵. Since HIV was detected, advances in research have allowed the emergence of new perspectives for improvement in the control and diagnosis of the disease⁶. Combined antiretroviral therapies started in 1996, formed by the combination of three or more antiretroviral drugs capable of acting at different stages of virus replication and suppressing viral replication and HIV progression⁷. These therapies have been considered more effective than single drug treatments⁸. Access to antiretrovirals has reduced opportunistic diseases by 50% and mortality rates for people living with HIV⁹. In addition to reducing the occurrence of opportunistic diseases and improving the quality of life¹⁰ antiretroviral provides a reduction in virus 11 transmission as low viral load reduces the risk of partner contamination¹². In Brazil, antiretroviral drugs are distributed free of charge¹³. According to data published by the Ministry of Health (2012)¹⁴ Souza, Tibúrcio and Koike (2016)¹⁵, described that there are 17 drugs used in the treatment of HIV/AIDS, but the success of these drugs depends on the patient's rate of adherence to treatment¹⁶. In this context, a therapy has been developed in Brazil to replace at least three drugs with just one pill

with three active ingredients from different classes of drugs, called Triple Combination Antiretroviral Therapy. The reduction in the amount of pills taken daily is a factor capable of improving the patient's adherence to the drug, providing a treatment that can ensure the reduction of morbidity and mortality of individuals living with HIV/AIDS. ¹⁷.

Adherence of antiretroviral drugs is evaluated through clinical data such as CD4 T lymphocyte count and viral load ¹⁸. Calvetti et al (2016) ¹⁹ evaluating Remor's; Milner-Moskovics's; Preussler's studies (2007) ²⁰ identified that adherence to treatment is a result of individual life with the need to maintain the use of antiretrovirals as prescribed by the doctor in his daily routine, while non adherence reflects a need for public health concerns, a threat to the complexity of long-term treatment and the presentation of various side effects ¹⁸.

People living with HIV achieve good rates of adherence with the use of antiretrovirals and have better quality of life ¹⁹. Considering the development of Triple Combination Antiretroviral Therapy, in which the patient uses only one drug with three active principles, it is necessary to assess whether this type of treatment is capable of ensuring patient compliance.

5 METHOD

- 5.1 This is a descriptive, cross-sectional and retrospective study with a quantitative and qualitative approach at the Infectology Center of the city of Juazeiro do Norte, Brazil, with patients diagnosed with HIV / AIDS undergoing conventional combination therapy. The Infectology Center attends approximately 900 patients living in 31 cities, corresponding to the states of Ceará, Pernambuco and Paraíba. A total of 74 patients, 18 years old or older, were treated with antiretroviral drugs for at least 6 months. Pregnant women, parturient women, and elderly people over 65 years of age were excluded from the study because they presented a different pharmacotherapeutic behavior. The data collection was done through the application of an adapted questionnaire, Cuestionario para La Evaluación de La Adhesión al Tratamiento Antirretroviral (CEAT-VIH), validated in Brazil by Remor, Millner and Preussler (2007) ²⁰, as a method to assess the degree of adherence to prescribed drug treatment.

The research was submitted to the ethics committee of Faculdade de Juazeiro do Norte - FJN, according to resolution 510/2016, CAAE protocol: 53825116.3.0000.5624, number: 1.522.985.

The survey participants were approached individually at the pharmacy office at the time of distribution of their antiretroviral drugs, when the data were collected through the questionnaire applied directly to the patient, as well as using the medical records collecting laboratory data from patients. The ethical guidelines followed the criteria for the application of the informed consent form (TCLE), an indispensable document according to resolutions 466/12 and 510/16, which seeks to ensure ethics in research with human beings.

The research presented a minimum risk of embarrassment to the participants, which was minimized by the application of an individual questionnaire orally, in a pharmaceutical office, ensuring total confidentiality of the information provided and the anonymity of their identity. On the other hand, the research aimed to benefit the patients, identifying the reasons that lead to non adherence to antiretroviral treatments, since there is constant care with the lives of patients diagnosed with HIV / AIDS, providing future interventions for improvements in pharmacological adherence rates. The data were analyzed by the SPSS 22.0 program, through descriptive statistics.

6 RESULTADOS E DISCUSSÃO

- 6.1 According to Obreli-Neto et al (2012) ²¹, adherence to therapy is the degree of commitment that the user has to follow a pharmacological treatment, which will modify some requirements in their lifestyle, with the guidance of health professionals in order to achieve the coterapeutic success of dapharma.

Corroborating with the answers to the questionnaires, 70 (94.60%) of the participants in this study had a satisfactory degree of adherence to ART therapy and 4 (5.40%) had a moderate adherence, indicating that they were adherent to the treatment. Ribeiro et al (2010)²², emphasized that adherence to ART has as a parameter to minimize the prolongation of signs and symptoms of the disease, being essential the participation of health professionals and their patients in clinics, since the degree of adherence to ART is positively correlated with clinical results.

In view of the adherence rates (**Figure 1**) measured in patients with ART, we found satisfactory adherence to conventional therapy, although it had a dose complexity that is a vulnerability factor for low pharmacological adherence due to the amount of drugs to be administered in this therapy. In contrast, in combined therapy it was evaluated as satisfactory due to its posological convenience, since the amount of pills used in each injection is reduced.

Figura 1: Distribuição de pacientes com HIV, grau de aderência à terapia ART.



* N: 74 Patients (Total patients).

Source: Patients treated in the Infectology Center (DST).

Osorio et al (2015)²³ indicated that before HAART, patients had a 78% prevalence of deaths annually, but with the introduction of the antiretroviral drug combination after a cohort study in France, this percentage gradually drops by about 23-55 %. Meanwhile, Batista et al (2014)²⁴, reports that drug abuse, alcoholism and the irrational application of antiretrovirals are one of the determining factors for secondary infections, as well as reducing the rate of pills and adherence to treatment.

RemorMilner-Moskovics & Preussler (2007)²⁰, observed that the complexity of therapy can influence the degree of adherence. However, patients who took more pills had a higher viral load (statistically significant ratio), and may indicate possible difficulties in following the treatment. The commitment to treatment, clarification by the health professional, incentives and confidence on the part of family members are other factors that increase the patient's adherence to treatment²⁵.

It was evidenced that the combined therapy used in patients with satisfactory degree of adherence showed a reduction in viral load (**Figure 2**) and increased TCD4 + lymphocytes (**Figure 3**), which demonstrates a clinical correlation with the expected results, confirming the pharmacotherapeutic success. These data confirm a reduction in the public health problem, which is linked to a decrease in viral transmission and opportunistic diseases such as tuberculosis, pneumonia, candidiasis, cryptococcosis, toxoplasmosis and others, affecting half of the world population.

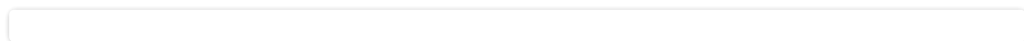
Figure 2: Viral load



* N: 74 Patients (Total patients).

Source: Patients treated in the Infectology Center (DST).

Figure 3: Lymphocyte count



* N: 74 Patients (Total Patients).

Source: Patients treated in the Infectology Center (DST).

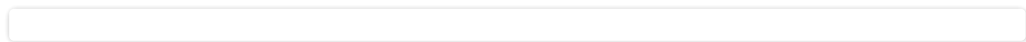
Ilias *et al* (2011)²⁶, claim that there are several studies that correlate non adherence to ART with large amounts of pills, drugs and daily doses to be taken. However, our study conducted at the Center for

Infectious Diseases STD/AIDS in Juazeiro do Norte-CE did not show this association. This significant adherence can be justified by the severity of the disease, making the patient more responsible for following the pharmacological adherence (**Figures 2 and 3**).

From a sociodemographic perspective, the degree of adherence was not influenced. Remor Milner-Moskovics and Preussler (2007) ²⁰ (emphasized that the adherence does not seem to be influenced by the socio-demographic characteristics of the sample. These factors have been addressed in other studies, such as Jordan et al (2000) ²⁷ and Lignani Jr. et al (2001) ²⁸ that did not consider the socioeconomic status as a good predictor of adherence to treatment. Lemos et al (2016) ²⁹ stated that there are more important factors in these studies capable of influencing the degree of adherence, except in places where there is extreme poverty.

In the classification of the intensity of the side effects, it was evidenced that 28 patients (37.84%) reported that the side effects were not intense. Despite the significant effects, for Romeo et al (2012) ³⁰ the difficulties related to side effects are insufficient to explain non adherence to treatment, since 72.9% of the patients interviewed considered the side effects insignificant (**Figure 4**).

Figure 4: Distribution of HIV patients, Side effects.



* N: 74 Pacientes (Total de Pacientes).

Fonte: Pacientes tratados no Centro de Infectologia (DST).

7 CONCLUSION

- 7.1 Patients who underwent combined therapy achieved a degree of adherence of 64.9%, which was higher than the degree of adherence to conventional antiretroviral therapy, which showed a result of 29.7%. The results of the diagnoses were correlated with the degree of adherence shown in the result of this research. We can observe that the combination of drugs allows the adherence of drug therapy and that the possibility of side effects was insufficient to identify the lack of adherence to therapy. Adherence to medication is a phenomenon strongly linked to the experience of treatment and may change over time, as changes may appear in this period. Difficulties occur during the whole treatment, with moments of greater or lesser adherence for all patients, besides the availability of the health team, in this case, the doctor was only available three times a week. The lack of qualified professionals can lead patients not to adhere properly to the treatment. Therefore, there must be a shared care between the health team and family members, keeping in mind that, to achieve an effective treatment, an alliance must be sought with the patients, emphasizing the importance and necessity of adherence to the treatment for therapeutic success and quality of life. Even with positive results increasingly achieved with the development of antiretroviral treatments, it is necessary to continue research, not only to prevent the spread of HIV/AIDS, but also to develop treatments that show an increasing degree of adherence, quality of life and life expectancy for patients.

8 FINANCING

9 ACKNOWLEDGEMENTS

10 DECLARATION OF COMPETING INTEREST

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