

Importance of pharmacist in pharmacotherapeutic adhesion of patients with HIV/AIDS

A importância do farmacêutico na adesão farmacoterapêutica de pacientes com HIV/AIDS

Importancia del farmacéutico en la adhesión farmacoterapéutica de pacientes con HIV/AIDS

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Abstract

Acquired Immunodeficiency Syndrome (AIDS) is a disease characterized by progressive stages after the vulnerability of the immune system to the Human Immunodeficiency Virus (HIV) infection, which can affect the worldwide population. The antiretroviral therapy (ART) indicated for infected patients improves the patient's quality of life by preventing disease progression. The health team, including the pharmacist, is essential to assist and ensure the safety and efficacy of pharmacotherapeutic treatment. This work aims to present the importance of pharmaceutical care in pharmacotherapeutic follow-up for HIV/AIDS patients through an

integrative literature review. 14 articles were analyzed, which showed a prevalence of the disease in a male patient over 30 years old, with an incidence always greater than 50%. The main causes that hinder adherence to antiretrovirals are disinformation on the risk of non-adherence, lack of understanding about prescription drugs, low education, drug, and alcohol use among male patients. Studies have shown that pharmaceutical care and the multidisciplinary team can positively assist in increasing adherence to antiretrovirals. Therefore, the interventions and guidelines carried out by the pharmaceutical professional together with the health team show promising results that favor adherence to medications by patients with HIV/AIDS. However, greater commitment and collaboration between health professionals is necessary to improve the quality of life of these patients, working mainly in the process of adhering to treatment.

Keywords: Pharmaceutical services; Drug therapy; Treatment Adherence and Compliance; HIV infections; Acquired Immunodeficiency Syndrome.

Resumo

A Síndrome da Imunodeficiência Adquirida (AIDS) é uma doença caracterizada por estágios progressivos após a vulnerabilidade do sistema imunológico à infecção pelo Vírus da Imunodeficiência Humana (HIV), que pode atingir toda a população mundial. A terapia antirretroviral (TARV) indicada aos pacientes infectados melhora a qualidade de vida do paciente ao evitar o progresso da doença. A equipe de saúde, incluindo o farmacêutico, é imprescindível para auxiliar e assegurar a segurança e eficácia do tratamento farmacoterapêutico. Dessa forma, este trabalho objetiva apresentar a importância da atenção farmacêutica no acompanhamento farmacoterapêutico aos portadores de HIV/AIDS através de uma revisão integrativa da literatura. Foram analisados 14 artigos, os quais evidenciaram uma prevalência da doença em paciente do sexo masculino acima dos 30 anos, com incidência sempre superior a 50%. As principais causas que dificultam a adesão aos antirretrovirais são: ausência de informações sobre o risco da não adesão, falta de compreensão sobre os medicamentos prescritos, baixa escolaridade, uso de drogas e álcool entre pacientes do sexo masculino. Estudos apresentaram que atenção farmacêutica e a equipe multidisciplinar podem auxiliar positivamente no aumento da adesão aos antirretrovirais. Portanto, as intervenções e orientações realizadas pelo profissional farmacêutico juntamente a equipe de saúde mostram resultados promissores que favorecem a adesão aos medicamentos pelos pacientes com HIV/AIDS. Entretanto, é necessário um maior empenho e colaboração entre os profissionais de

saúde em busca do progresso da qualidade de vida desses pacientes, trabalhando principalmente no processo de adesão ao tratamento.

Palavras-chave: Assistência farmacêutica; Tratamento farmacológico; Cooperação e adesão ao tratamento; Infecção por HIV; Síndrome de imunodeficiência adquirida.

Resumen

El Síndrome de Inmunodeficiencia Adquirida (AIDS) es una enfermedad caracterizada por etapas progresivas luego de la vulnerabilidad del sistema inmunológico a la infección por el Virus de Inmunodeficiencia Humana (HIV), que puede afectar a la población mundial. La terapia antirretroviral (ART) indicada para pacientes infectados mejora la calidad de vida del paciente al prevenir la progresión de la enfermedad. El equipo de salud, incluido el farmacéutico, es fundamental para ayudar y garantizar la seguridad y eficacia del tratamiento farmacoterapéutico. Este estudio tiene como objetivo presentar la importancia de la atención farmacéutica en el seguimiento farmacoterapéutico de los pacientes con HIV/AIDS a través de una revisión integradora de la literatura. Se analizaron 14 artículos que mostraron una prevalencia de la enfermedad en un paciente masculino mayor de 30 años, con una incidencia siempre superior al 50%. Las principales causas que dificultan la adherencia a los antirretrovirales son la falta de información sobre el riesgo de no adherencia, la falta de comprensión sobre los medicamentos recetados, la baja educación, el consumo de drogas y alcohol entre pacientes masculinos. Los estudios han demostrado que la atención farmacéutica y el equipo multidisciplinario pueden ayudar positivamente a aumentar la adherencia a los antirretrovirales. Por tanto, las intervenciones y pautas realizadas por el profesional farmacéutico junto con el equipo de salud muestran resultados prometedores que favorecen la adherencia a la medicación por parte de los pacientes con HIV/AIDS. Sin embargo, es necesario un mayor compromiso y colaboración entre los profesionales sanitarios para mejorar la calidad de vida de estos pacientes, trabajando principalmente en el proceso de adhesión al tratamiento.

Palabras clave: Servicios farmacéuticos; Quimioterapia; Cumplimiento y adherencia al tratamiento; Infecciones por HIV; Síndrome de inmunodeficiencia adquirida.

1. Introduction

Acquired Immunodeficiency Syndrome (AIDS) is a disease characterized by progressive stages after the vulnerability of the immune system to Human Immunodeficiency Virus (HIV) infection (Moraes, Oliveira & Costa, 2014), can affect any the individual in the

worldwide population, regardless of social class, age, ethnicity or gender, and is a public health difficulty to be faced (Prado et al., 2016).

This contamination covers a wide spectrum of clinical aspects, from the acute phase to the progressive phase of the disease. In untreated people, it is estimated that the average between contagion and the onset of the disease period is around ten years (Brazil, 2018).

Data from the 2019 epidemiological bulletin of the Brazilian Ministry of Health, 300,496 new cases of HIV in Brazil was registered in the Notifiable Diseases Information System (SINAN) since 2007, with the South and Southeast regions, having the highest number of infections. As for AIDS, in 2018 alone, 37,161 cases of the disease were reported; however, since 2012, there has been a decrease in new cases in the country, from 21.7/100,000 inhabitants (2012) to 17.8/100,000 inhabitants in 2018, representing a decrease of 16.8% (Brazil, 2019).

The combination antiretroviral therapy indicated to infected patients' treatment improves the patient's quality of life and prevents the progress of the disease caused by HIV. So, requires continuous use of medications and to guarantee the effectiveness of drug therapy, it is extreme importance that the patient to adhere to the prescribed pharmacotherapy (Santos et al., 2015).

To achieve an undetectable viral load with the antiretroviral treatment (ART), the users need to use approximately 95% of the prescribed doses. In cases of non-adherence to treatment, viral resistance, and treatment failure are favored. The poor understanding of patients about the proper use of antiretrovirals associate with the disinformation on the risks of non-adherence are the main factors for incorrect administration and non-adherence to treatment (Rodrigues et al., 2015).

Pharmaceutical care is considered a patient-centered practice where the pharmacist is responsible for the drug therapy aiming definite outcomes and is important to ensure the success and adherence to drug therapy, especially the antiretroviral treatment for patients with HIV (Ribeiro do Vale & Pagliari, 2017).

Is essential that the pharmacist stay with the patient to guide regarding the use and information therapy, to bring better clinical results and quality of life for people assisted by this professional. Studies showed that well-structured pharmaceutical care as part of a pharmacy service positively and directly influences the clinical results of pharmacological treatment of chronic diseases such as AIDS (Rodrigues et al., 2015).

This work aims to present the importance of pharmaceutical care in pharmacotherapeutic follow-up for people living with HIV/AIDS.

2. Methodology

This work was elaborated from an integrative literature review, which according to Souza, Silva and Carvalho (2010) is a method that makes it possible to singularize the results of available scientific knowledge on a given theme to delineate and direct the data for analysis with rigor and scientific methodology.

To find research on the importance of pharmaceutical care in the dispensing and monitoring of patients with HIV/AIDS, it searched papers indexed in the databases of Scientific Electronic Library Online (SciELO), Google Scholar and Latin American and Caribbean Literature in Health Sciences (LILACS). The terms used were: "Pharmaceutical Care", "HIV", "AIDS" and "Adherence to pharmacotherapeutic treatment". The inclusion criteria were articles published in the period from 2014 to 2020; articles related to the theme; articles in Portuguese; original articles and bibliographic review. Exclusion criteria were considered studies that did not meet the inclusion criteria.

The research selected publications that approached the theme in a clear and objective way and that answered the question: how the Pharmaceutical Care contribute to the patient to face the challenges of treatment and consequently adhere to drug therapy?

The search resulted in 35 articles. After analysis, those who did not meet the inclusion criteria were excluded. 14 articles were selected, which were thoroughly analyzed to compose the discussion of this research.

For a better results compression, this work is divided into 3 categories: (I) sociodemographic characteristics of HIV/AIDS patients; (II) difficulty in adhering to antiretrovirals by patients with HIV/AIDS; and (III) the importance of the pharmacist and the multidisciplinary team in the treatment of patients with HIV/AIDS.

3. Results and Discussion

AIDS is an infectious disease caused by HIV marked by progressions due to the reduction of immune cells of the lymphoid lineage, specifically T helper lymphocytes (Th cells), also known as CD4 + cells, caused by a significant increase viral load (Moraes, Oliveira & Costa, 2014). It is an unstable disease, of universal character, considered a serious public health problem because it needs the cooperation of the community and health professionals, from public and private networks, to allow the control of the disease, rational use of antiretrovirals drugs and the patient's quality of life (Dantas et al., 2014).

3.1 Sociodemographic characteristics of HIV/AIDS patients

Table 1 shows most male patients in all studies evaluated. Camargo et al. (2014) and Santos et al. (2015) demonstrated, respectively, that 52% and 53% of the studied population were male. Prado et al. (2016) identified a greater quantity, 80%. However, the low number of users in the study may not guarantee the reliability of this data. Finally, the 2019 National HIV/AIDS Epidemiological Bulletin indicates that 69% of HIV/AIDS cases reported in the country since 2007 are males.

Regarding age, the predominant age group in Brazil is 20 to 34 years old (Brazil, 2019). But the data collected by the researchers showed a slight increase in this average, since most patients were over 39 years old, exactly as exposed by Prado et al. (2016), where the age of the participants in their research ranged between 33 and 62 years. Camargo et al. (2014) and Santos et al. (2015) reported very approximate averages, being 39.4 and 40 years old, respectively. Therefore, the population over 30 years old may be more vulnerable, since they are prevalent in all analyzes.

Despite the similarities in the results above presented, regarding education, the data were more divergent. In the study designed by Camargo et al. (2014), 39.3% of participants had a middle school, while 39.6% had high school. The National Profile (2019), however, it is identified that 12.1% incomplete middle education and 20.7% had completed high school. And it differs even more with what was found by Prado et al. (2016), where 60% had only 1 to 4 years of study. Santos et al. (2015) did not present data for this item.

As mentioned, there was no pattern, making it impossible comparison of these. Besides, these results may indicate an inadequacy in data filling. Although HIV infection and your complication, AIDS, are not directly associated to people of low social status, being characterized by multifaced and present in people of low or high economic power, as well as in several other social criteria (Caetano & Neto, 2016), the data about schooling is susceptible to these variations.

Make mention to the fact that, in all these studies, HIV infection prevailed in male patients, with an incidence always exceeding 50%, an average age above 30 years old, mainly, and a diverse degree of schooling.

Table 1 – Main articles used in the research, with their sociodemographic characteristics of HIV/AIDS patients.

AUTHOR	TITLE	YEAR	RESEARCH LOCATION	TYPE OF STUDY	RESULTS
Camargo et al.	Social representations and adherence to antiretroviral treatment	2014	Santa Catarina	Quantitative, qualitative, and descriptive study.	Of the 154 patients, 53% were male; the average age was 40 years; as for education, 39.3% completed middle school and 39.6% high school.
Santos et al.	Adherence to Antiretroviral Therapy for individuals with HIV/AIDS served in specialized assistance service (SAE) in a city of Ceará	2015	Quixadá-Ceará	Cross-sectional, observational, retrospective, and descriptive study.	Of the 23 patients, 52% of the research participants were male; the average age was 39.4 years; schooling was not assessed by this study.
Prado et al.	Pharmacotherapeutic follow-up of HIV positive patients at a dispensing antiretroviral Medicines Unit	2016	Alfenas	Prospective study	Of the 10 patients, 80% of the patients were male; 70% were over 39 years old; and 60% had 1 to 4 years of study.
Brasil	National Epidemiological Bulletin on HIV/AIDS	2019	Brasil	Quantitative and qualitative study	Of the 300,496 cases notified between 2007 and 2019, 69.0% were male; 52.7% were in the 20 to 34 age group; 12.1% incomplete middle school and 20.7% had completed high school.

Source: search results (2020).

3.2 Difficulty in adhering to antiretrovirals by patients with HIV/AIDS

Although being a chronic and progressive disease, HIV infection is controllable with antiretroviral therapy (ART), used in Brazil since the 1990s, consists of the combination of at least three antiretroviral (ARV) drugs to maximally suppress the virus, contributes to improving the quality of life. This standard therapy aims to reduce the viral load to decrease the mortality and morbidity rates and stop the progression of HIV disease, enabling an improvement in the patient's immune system. The ARV drugs require a chronic use, so the professionals involved become essential (Mota, 2018).

Table 2 presents a documentary research carried out by Mota (2018) in 76 medical records and notification forms of users with HIV who abandoned treatment, resulted in non-adherence to antiretroviral treatment mainly affecting patients over 30 years old (62%), with low education and low family income. Male patients accounted for 53% of those who reported having difficulty adhering. The main reasons that led to treatment abandonment were drugs, alcohol and change of address of users.

Like the study, Silva et al. (2015) found that more than half of the patients (64.8%) who did not treatment adherence were male. Besides, a large part (46.3%) had low education and used illicit drugs. The authors pointed out that younger patients are twice as likely to not adhere to therapy compared to older ones, for them the same happens to those low schooling patients. They also found adverse drug reactions (ADRs) at the beginning of treatment was another reason for poor or non-adherence. Corroborating, Cancian et al. (2015) found that of the 90 registered non-adherent patients, only 39 attended the multiprofessional consultations, where one of the main factors for non-adherence reported by them were the gastrointestinal adverse effects.

Cancian et al. (2015) also found that most of the research participants are age group above 27 years old, with females prevailing, showing that women are more concerned in terms of health care than men, and as found in previous studies, part of the patients (56.41%) had a low level of education, of which, according to the authors, is a factor that led patients to abandon ART in the beginning.

Morais, Oliveira and Costa (2014), in a quantitative study involving 136 male participants, could note that the greater part of a group (63.3%) were considered insufficient or regular ART adherence, and only 36.7% had good adherence. In the survey, the authors observed that treatment with only one antiretroviral was not indicated, the majority was given by three (66.2%) or by four drugs (32.3%).

Similar to Cancian et al. (2015), Morais, Oliveira and Costa (2014) noted that male patients go to the health services and have a low pharmacological adherence. The same authors identified that the prescribed therapeutic regimens are a factor that directly contributes to ART adherence, because a greater number of drugs used or prescribed can result in a lower continuous and correct use by patients.

The disinformation about the risk of non-adherence, the understanding of the prescription drugs, low education, drug, and alcohol use are among the main causes that hinder adherence, especially for males. Due to the greater resistance of this group to go to health services, it is essential to provide them with information on drug therapy to be used, because it may reduce the cases of non-adherence (Cancian et al., 2015).

This idea is also mentioned by Mota (2018), where the author found that the quantity of users that not adhering to treatment has been decreasing over the years, due to the fact that many are receiving better information from health teams, making their frequencies in places where HIV/AIDS treatments more regular.

Table 2 – Main articles and their characteristics, about the difficulty in adhering to treatment with antiretrovirals by patients with HIV/AIDS.

AUTHOR	TITLE	YEAR	RESEARCH LOCATION	TYPE OF STUDY	RESULTS
Moraes, Oliveira and Costa.	Adherence of men living with HIV/AIDS to antiretroviral treatment	2014	Pernambuco	Quantitative, qualitative, and descriptive study.	It was identified that many male patients do not have an aptitude for satisfactory treatment, being in fact a difficult care process and dependent on several factors - social, cultural, economic, and clinical.
Cancian et al.	Importance of multidisciplinary care to rescue the patient with HIV/AIDS presenting poor adherence to antiretroviral therapy	2015	Rio Grande do Sul	Qualified listening was performed, followed by guidelines for different professional areas.	The low level of education found among individuals assisted by the multiprofessional team shows that this is one of the probable factors that led patients to abandon ART initially.
Silva et al.	Factors associated with non-adherence to antiretroviral therapy in adults with AIDS in the first six months of treatment in Salvador, Bahia State, Brazil	2015	Salvador	Cross-sectional study.	The main factors of non-adherence pointed out by this study were the manifestation of adverse reactions to medications, age, education, and the use of illicit drugs.
Mota	Usuários vivendo com HIV: desafios acerca da adesão ao tratamento no serviço de assistência especializada e centro de testagem e aconselhamento de Manhuaçu/MG	2018	Manhuaçu	Documentary research with descriptive statistical analysis and a quantitative and qualitative approach.	It was noticed that education and family income interfered in the abandonment of ART. The consumption of alcohol and illicit drugs are among the biggest contributors to non-adherence.

Source: search results (2020).

3.3 The importance of the pharmacist and the multidisciplinary team in the treatment of patients with HIV/AIDS

As already described at the beginning of this research, adherence to antiretroviral therapy has a fundamental importance to achieve an undetectable viral load and guarantee a quality of life for patients with HIV/AIDS. Factors such as: inadequate understanding of the use of antiretrovirals associated with the disinformation on the risks of non-adherence, generate the irrational use of medications, reducing safety and therapeutic efficacy. As result, the pharmaceutical guidance as well as the others health professionals is essential for patients with HIV/AIDS to achieve treatment success (Rodrigues et al., 2015).

Vielmo et al (2014) analyzed that after the use of pharmaceutical care in patients with HIV/AIDS, there was an increase in the rates of knowledge of the disease, where 64.7% started to present good knowledge and 35.2% excellent knowledge, values that before being employed in the pharmaceutical service showed that only 15% of patients had regular knowledge, 75% good and 10% excellent. The authors also found that most patients who did not receive pharmaceutical care had a lower adherence to clinical and pharmacological treatment, while those who received the pharmaceutical service showed a reduction in viral load, demonstrating better adherence and effectiveness of therapeutic treatment. Therefore, it is demonstrated that the pharmacist's contribution positively influences the maintenance of satisfactory adherence rates during the treatment.

The importance of the interaction between the pharmacist and the health team with the patient described by Vielmo et al. (2014) showed that, with the possibility of the emergence of drug-related problems (DRP), before causing damage to the patient and adherence, the pharmacist, being one of the most suitable professionals for this situation, can assess the problem and enter with an appropriate conduct, in order to minimize the damage and collaborate with the users' quality of life.

A study carried out by the Municipal Health Foundation of Ponta Grossa, Paraná, showed that a pharmaceutical care and a qualified multidisciplinary team can positively assist in the decision of patients to adhere to antiretroviral treatment, since after the implementation of a protocol of first pharmaceutical care to patients with HIV at the beginning of ART there was no record of any withdrawal one year after the beginning of the practice (BRASIL, 2019). Accordingly, Rodrigues et al. (2015) highlighted that the presence of the pharmaceutical professional inserted in the care team for infected patients is directly related to improving medication adherence, decreasing viral load, and reducing hospitalizations.

Prado et al. (2016) found that after the implementation of pharmaceutical monitoring in an antiretroviral medication dispensing unit, there was a resolution of 53.85% of the detected DRPs, and showed the importance of the pharmacist's daily presence in these health services, in order to develop pharmaceutical care and assistance services. Moreover, Santos et al. (2015) evidenced that the pharmaceuticals interventions and orientations have been implemented in the country with satisfactory and promising results in the therapeutic adherence by patients with HIV, in addition to being possible to optimize the prescriptions, reducing the adverse reactions risks, which decreases avoidable interactions and consequently the costs of health services. The authors reported that most deaths in AIDS patients are related to treatment interruption by the patient himself, followed by viral resistance, which limits therapeutic options.

4. Conclusion

Considering the analyzes performed, it was observed that in the last years the HIV/AIDS cases in this country have been decreasing, due to the more appropriate instructions that the health teams and the pharmacist are providing with these users, allowing a greater attendance of these patients to the treatment locals.

As for sociodemographic factors, it was noted that males' patients are most affected by the disease in this country, already characterized by those patients who seek health services less, doing so only for curative practices, opposite females, who are more concerned with this factor. Consequently, they are the most difficult in adhering to ART.

The disinformation about the risk of non-adherence and the prescription drugs, besides low schooling, low family income, the use of licit and illicit drugs and the number of drugs used are among the main causes that hinder patients to adherence to antiretrovirals drugs. This makes the pharmaceutical care and the others health professionals cares essential for patients living with HIV/AIDS to achieve success in treatment.

The importance of pharmaceutical professional and a multidisciplinary health team in the follow-up of these patients with HIV/AIDS was evidenced. So, they can positively assist in the decision of patients to adhering to antiretroviral treatment, besides the pharmacist having the possibility to intervene and help them in the drug-related problems used by them, ensuring a better quality of life for users.

The interventions and orientations carried out by the pharmaceutical professional have been implemented in the country with satisfactory results, showing promising results in improving medication support by patients with HIV/AIDS. However, it is necessary a greater

commitment and union of health professionals in search of progress in the quality of life of these patients, working mainly in the process of treatment adhering.

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