Profile of sexually exposed individuals attended in a specialized care service STD/AIDS
Perfil dos indivíduos expostos sexualmente atendidos em um serviço de atenção especializada em DST/AIDS
Perfil de personas sexualmente expuestas atendidas en un servicio especializado de atención de ETS/SIDA

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Received: 9/04/2020
Accepted: 4/07/2020

ABSTRACT:
Objective: The aim of the study was to identify the profile of the individuals searching for care in a Specialized Care Service (SCS) in HIV/AIDS for guidance, prevention and prophylaxis for HIV after sexual exposure.

Methods: Quantitative, descriptive study, based on secondary data from 312 service reports from December 2010 to December 2014 in an SCS in Porto Alegre/Brazil. The selected data were: age; sex; exposure routes; positive / negative cases in the first test; return for follow-up and antiretrovirals used in prophylaxis.

Results: Male gender predominated (73.7%), the age group with the highest incidence was between 20 and 39 years old (75.1%). The most chosen route for sexual practice was the vaginal one with 52.6%. In 63.3% of cases, patients were unaware of their partners' serology and 35.7% knew their partner had the HIV virus, but did not use a condom. Even if exposed to partners with unknown or known HIV serology, 61.6% did not return to SCS. The two most prescribed antiretrovirals were those recommended by the Ministry of Health at the time.

Conclusion: It is suggested to implement measures and campaigns to assist in the prevention of AIDS and, also, reinforce the importance of carrying out all stages of monitoring after sexual exposure.

Key words: Post-Exposure Prophylaxis; HIV; Acquired Immunodeficiency Syndrome.

RESUMO:
Objetivo: O objetivo do estudo foi identificar o perfil dos indivíduos que procuraram por atendimento em um Serviço de Atenção Especializada (SAE) em DST/AIDS para orientação, prevenção e profilaxia para HIV após exposição sexual.

Método: Estudo quantitativo, descritivo, baseado em dados secundários de 312 boletins de atendimento do período de dezembro de 2010 a dezembro de 2014 em um SAE de Porto Alegre/Brasil.
Os dados selecionados foram: faixa etária dos indivíduos; sexo; vias de exposição; casos positivos/negativos na primeira testagem; retorno para acompanhamento e antirretrovirais utilizados nas profilaxias.

Resultados: Predominou o sexo masculino (73,7%), a faixa etária de maior incidência foi entre 20 a 39 anos (75,1%). A via de maior escolha para prática sexual foi a vaginal 52,6%. Em 63,3% dos casos os pacientes desconheciam a sorologia dos parceiros e 35,7% sabiam que seu parceiro era HIV, porém não fizeram o uso do preservativo. Mesmo se expondo com parceiros de sorologia desconhecida ou sabidamente HIV, 61,6% não retornaram ao SAE. Os dois antirretrovirais mais prescritos foram os recomendados pelo Ministério da Saúde na época.

Conclusões: Sugere-se a implementação de medidas e campanhas que auxiliem na prevenção da AIDS e, também, reforcem a importância na realização de todas as etapas do acompanhamento após a exposição sexual.

Palavras-chave: Profilaxia Pós-Exposição; HIV; Síndrome de Imunodeficiência Adquirida.

RESUMEN:
Objetivo: El objetivo del estudio fue identificar el perfil de las personas que buscaron atención en un Servicio de Atención Especializada (SAE) en ETS/SIDA para orientación, prevención y profilaxis del VIH después de la exposición sexual.

Método: Estudio cuantitativo, descriptivo, basado en datos secundarios de 312 informes de diciembre de 2010 a diciembre de 2014 en un SAE de Porto Alegre/Brasil. Los datos seleccionados fueron: edad; sexo; rutas de exposición; casos positivos/negativos en la primera prueba; regreso para seguimiento de antirretrovirales utilizados em las profilaxias.

Resultado: Predominó el género masculino (73.7%), el grupo de edad con mayor incidencia fue entre 20 y 39 años (75.1%). La ruta más elegida para la práctica sexual fue la vaginal 52.6%. En el 63.3% de los casos, los pacientes desconocían la serología de sus parejas y el 35.7% sabían que su pareja era VIH, pero no usaban condones. A pesar de exponerse a parejas con serología del VIH desconocida o conocida, el 61.6% no regresó a SAE. Los dos antirretrovirales más recetados fueron los recomendados por el Ministerio de Salud en ese momento.

Conclusión: Se sugiere implementar medidas y campañas que ayuden en la prevención del SIDA y, además, reforzenc la importancia de llevar a cabo todas las etapas del monitoreo después de la exposición sexual.

Palavras clave: Profilaxis posterior a la exposición; VIH; Síndrome de inmunodeficiencia adquirida.

INTRODUCTION

Acquired Immunodeficiency Syndrome (AIDS) is caused by the Human Immunodeficiency Virus (HIV) belonging to the genus Lentivirus of the Retroviridae family and is divided into types HIV-1 and HIV-2, types that adapt to different human conditions and may suffer mutations \(^{(1)}\). Some strains of mutations are not recognized by the mechanisms of immune response, so they replicate freely and are resistant to antiretrovirals \(^{(2)}\).

HIV-1 is the most common of the strains identified and in Brazil, subtype B being the most commonly found, followed by F and C, with few cases of D and A. In the southern region of Brazil, specifically in the state of Rio Grande do South, the prevalence is type C \(^{(3)}\).

The state of Rio Grande do Sul ranked 2nd in the HIV detection ranking in Brazil, with 31.8 cases for every 100,000 inhabitants in 2018 \(^{(4)}\). With regard to cases of death, it leads the ranking of states with 9.6 cases of death for every 100,000 inhabitants. Notifications show that 10,344 cases are from men and 8,557 are from women. Regarding self-declared race / color, 73.9% are white, 14.3% black and 11.2% brown. The cases in RS are concentrated in the capital, Porto Alegre and Vale do Gravatai (35.6%). The capital of Rio Grande do Sul, Porto Alegre, is the municipality that stands
out with a high rate of infection by the HIV virus and leads the ranking among national capitals, with 22.4 deaths and a detection rate of 67.7 per 100 thousand inhabitants\(^5\).

It is estimated that 75% to 85% of infections occur through sexual practices, which are considered the most important routes of transmission, since the first AIDS investigations and the discovery of their etiological agent. In Latin America, cases that occur between homosexuals and bisexuals predominate, although there is an increase in transmission among heterosexuals\(^6\). In Brazil, it was found that 59.4% of cases among men were due to homosexual or bisexual exposure and 36.9% heterosexual in the period from 2007 to 2018. However, in women 96.8% of cases fall into the heterosexual category\(^4\).

Any sexual intercourse in which fluid exchange occurs has the risk of transmission, however, some people, even after several sexual contacts with HIV carriers, remain uninfected. This is due to genetic factors, immune response, type and subtype of the etiologic agent. Unprotected receptive anal sex is the practice that presents the highest risk of infection for both sexes, and oral sex, despite not having an important route of transmission, has been the only route of transmission in different population groups\(^6\).

The inclusion of Sexual Exposure Prophylaxis (sexual PEP) in the HIV prevention and transmission policy organizes the entry of patients into the service network of people at risk, such as cases of sexual violence, serodiscordant couples and sexually exposed people. For these, access to testing, diagnosis and counseling is available, in order to reduce vulnerability and promote education and guidance on safe sexual practices\(^7\). Access to the health service network can occur through the Specialized Care Services (SCS), which is an outpatient unit focused on comprehensive care for people with STD/HIV/AIDS composed of a multidisciplinary team\(^8\).

At the SCS, after the first test, if the result is positive, the patient enters the service network to monitor and treat the infection, depending on the type of virus identified. If the result is negative, the indication is prophylaxis with antiretrovirals and the return in 30 and 180 days for repetition of the exams, due to the possibility of having a period called the “immunological window”\(^7\).

In view of the increase in cases of infection by the HIV virus, evidenced by the high detection rate in Porto Alegre, which is currently the highest in the country, the objective of this research is to describe the profile of individuals who seek care in a Specialized Care Service for STDs / AIDS for guidance, prevention and prophylaxis for HIV / AIDS after sexual exposure in this municipality.

**METHOD**

Quantitative, descriptive, retrospective, cross-sectional study carried out from May 05 to 30, 2015.

Secondary data were collected from the outpatient care bulletins and the Logistics Control System for Medicine (SICLOM) of a Specialized Care Service (SCS) in STD/AIDS, located in the Vila dos Comerciários Health Center. This is a secondary care service, belonging to the Municipal Health Department of the municipality of Porto.
Alegre in the Santa Teresa neighborhood, Porto Alegre / RS. All service bulletins from December 2010 to December 2014 were included in the survey.

The selected data were: age group of individuals; sex; exposure routes; positive/negative cases in the first test; return for follow-up and antiretrovirals used in prophylaxis.

Data analysis was performed using the statistical program SPSS (Statistical Package for the Social Sciences), version 19 and descriptive statistics was used to describe the results.

This research was carried out after approval by the Research Ethics Committee of the Lutheran University of Brazil (ULBRA) under CAAE n° 42594114.1.0000.5349 (312 consulted bulletins).

**RESULTS**

During the study period 312 service reports from individuals who sought the SCS were consulted, the majority being male (73.7%), ranging from 14 to 69 years old (Table 1).

<table>
<thead>
<tr>
<th>Age Group n* Percentual (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>14-19 20 6.6</td>
</tr>
<tr>
<td>20-29 112 37.2</td>
</tr>
<tr>
<td>30-39 114 37.9</td>
</tr>
<tr>
<td>40-49 35 11.6</td>
</tr>
<tr>
<td>50-59 16 5.3</td>
</tr>
<tr>
<td>60-69 4 1.3</td>
</tr>
</tbody>
</table>

* 11 not informed

The sexual route most used by individuals was vaginal (52.6%), followed by anal (25.6%) and oral (3.6%). In addition, the occurrence of multiple pathways (two or more) were present in 17.2% and 1% had non-sexual exposure.
Of the 312 consultations, 275 newsletters provided information on the rapid HIV test. Only four refused the test (1.4%), 1.1% were positive and 97.5% were negative. In addition, 81.8% of patients were referred for laboratory tests for HIV, hepatitis B, C and syphilis. In 6.4% of cases there was no information. Regarding the partner's serology, 35.7% had HIV, 1% were negative, while 63.3% of the partners had unknown serology.

Post-Exposure Prophylaxis (PEP) at risk for HIV infection, viral hepatitis and other sexually transmitted infections (STIs) consists of using medications to reduce the risk of acquiring these infections. Table 3 shows the types of antiretrovirals (ARV’s) used in this SAE. Only one individual refused prophylaxis, two were referred to an infectologist, three did not wait for care, one reported that he would seek a return or private care. Antiretroviral prophylaxis was not indicated for 45 individuals.

<table>
<thead>
<tr>
<th>Types of antiretrovirals (ARV’s)</th>
<th>N*</th>
<th>Percentual (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>LPV-r/AZT+3TC</td>
<td>115</td>
<td>40.2</td>
</tr>
<tr>
<td>T+3TC/TDF</td>
<td>112</td>
<td>39.2</td>
</tr>
<tr>
<td>3TC/TDF/RLT</td>
<td>2</td>
<td>0.7</td>
</tr>
<tr>
<td>ATV300/3TC/TDF</td>
<td>1</td>
<td>0.3</td>
</tr>
<tr>
<td>ATV300/RTV/AZT+3TC</td>
<td>1</td>
<td>0.3</td>
</tr>
<tr>
<td>ATV200/AZT+3TC</td>
<td>1</td>
<td>0.3</td>
</tr>
<tr>
<td>EFZ/3TC+AZT</td>
<td>1</td>
<td>0.3</td>
</tr>
<tr>
<td>In use 48h LPV-r/3TC+AZT</td>
<td>1</td>
<td>0.3</td>
</tr>
</tbody>
</table>

Regarding the 1st return and follow-up of individuals who sought SAE after sexual exposure, 31% of patients returned within 30 days, 7.5% returned within 60 days and 61.5% did not return. In the 2nd return for clinical evaluation and follow-up, 6.5% returned in 60 days, 0.7% in 90 days and 0.4% in 30 days, with 92.4% not returning. Twelve patients were sexually exposed more than once and returned to the SAE (Table 4).

<table>
<thead>
<tr>
<th>Patients</th>
<th>Number of relapses</th>
<th>Percentual (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patient 1</td>
<td>5</td>
<td>29.4</td>
</tr>
<tr>
<td>Patient 2</td>
<td>2</td>
<td>11.7</td>
</tr>
<tr>
<td>Patient 3</td>
<td>1</td>
<td>5.9</td>
</tr>
<tr>
<td>Patient 4</td>
<td>1</td>
<td>5.9</td>
</tr>
<tr>
<td>Patient 5</td>
<td>1</td>
<td>5.9</td>
</tr>
<tr>
<td>Patient 6</td>
<td>1</td>
<td>5.9</td>
</tr>
<tr>
<td>Patient 7</td>
<td>1</td>
<td>5.9</td>
</tr>
<tr>
<td>Patient 8</td>
<td>1</td>
<td>5.9</td>
</tr>
<tr>
<td>Patient 9</td>
<td>1</td>
<td>5.9</td>
</tr>
</tbody>
</table>
In the four-year period, it was found that the profile of care in the SAE was predominant among young adults between 20 and 39 years old (62.4%) and male. A similar result was found in other studies with patients in care in other centers in Brazil and emphasizes the importance of developing strategies for this group, since it was the one that was most exposed to sex\textsuperscript{(9-13)}.

It was observed that as the time after sexual exposure increases, especially after 24 hours, the search for care decreases. The Ministry of Health recommends that the ideal is to start using ARV’s as soon as possible, preferably within the first two hours after exposure and at most within 72 hours\textsuperscript{(7)}. In this study, only seven individuals sought care after this period. Risk/Promiscuity and Guilt/Accountability composes a series of social markers that articulate with different narratives and reiterate sexuality as an individualized dimension, and that in order to be a collective process, health promotion must be expanded as a centralizing element of the process\textsuperscript{(14)}. Based on this and the importance of the PEP, it would be necessary for professionals working in the SAE to appropriate different dynamics, to make users aware of the importance of using ARVs and returning to service.

Sexual intercourse was the main form of exposure used, confirming the findings of other studies\textsuperscript{(11, 13, 15)}. In this study, the most used route was vaginal (52.6%), followed by anal (25.6%). The use of multiple routes in the sexual act was 17.2%, which may reveal a change in behavior and new sexual practices, different from traditional and religious models in which sex was synonymous with marriage and procreation, in addition to love for partner.

In this study, it was observed that most individuals were unaware of the serology of the source partners. However, those who knew that the source was HIV positive serology, did not use any preventive method, making them vulnerable and susceptible to exposure to the virus. Efforts need to be made to improve access to methods, including the most classic ones, such as male and female condoms. Knowledge, access and adequate use of these methods on a population scale are essential elements for effective control of the HIV/AIDS epidemic\textsuperscript{(16)}. The lack of commitment to condom use is independent of sex and marital status. The predominant reason reported for not using it for men, single and under the influence of alcohol associated with drugs was "dislike". Only women reported the “partner not accepted”, which is the reason for not using a condom \textsuperscript{(17)}.

The performance of the rapid test for HIV serology in individuals seeking NCS is of great importance, as the result is non-reactive, the exposed person is susceptible to HIV and treatment with retrovirals should be started, decreasing the likelihood of developing the disease. In this study, it was possible to observe that in relation to the number of patients who underwent the rapid test, 1.1% of the cases were positive for HIV infection. Only 1.4% chose not to perform the test. In the rapid test, most of the
results were negative, it should be noted that some may be in the incubation period. As a result, it may not be possible to detect the infection, or they are in the immunological window where the defense cells are producing an immune response, in an attempt to eliminate the virus so that it does not establish itself in the body.

In this study it was possible to observe that the majority of patients did not return for clinical evaluation and follow-up in both the first and second visits. In addition, of the patients seen, 12 were sexually exposed again and returned to the SAE. Of these, one patient was exposed five times and another, twice, the others, reported only once. These data are worrying, since the patient may have the virus and not know it, facilitating the spread of HIV and developing the disease by not starting antiretroviral therapy.

Porto Alegre has high rates of infection by the HIV virus and leads the ranking of deaths among federal capitals in Brazil\(^4\). Regular use of ARV’s is essential to ensure disease control and prevent progression to AIDS. Good adherence to antiretroviral therapy (ART) brings great individual benefits, such as increased disposition, energy and appetite, increased life expectancy and the non-development of opportunistic diseases. It can also be said that treatment can be used as a very effective form of prevention for people living with HIV, thus preventing sexual transmission of HIV\(^7\).

In addition to the rapid test, most patients (81.8\%) were referred for laboratory tests for HIV, Hepatitis B, C and syphilis, sexually transmitted infections (IFS), as recommended by the Ministry of Health in PEP, after sexual exposure.

The combinations of ARV’s - AZT + 3TC + TDF and LPV-r / AZT + 3TC were the most used in this study in Post Exposure Prophylaxis (PEP), being those recommended at the time by the Ministry of Health (18), as they work by inhibiting protease and reverse transcriptase, preventing HIV virus replication. Other combinations of ARV’s were also identified, indicated in situations where the partner is known to be HIV and adherent to treatment, classified as a case of serodiscordance. In these situations, the same combinations of the source partner’s antiretroviral therapy were used.

It was possible to observe that important information was missing in the service bulletin of individuals seeking support in the SAE, also reported in other studies\(^{9,14}\). In order to provide follow-up to the individual and subsequent planning of prevention and control actions, it is suggested that the attendance report should include other sociodemographic data, such as: complete address, education, marital status, occupation, ethnicity and family income.

Among the limitations of this study, we can mention that it was carried out with secondary data, which had blank fields and were recorded by different professionals, which may interfere with the results. In addition, the data collected were not representative of the population of the municipality, as it is an SAE unit and the demand for care is spontaneous demand.

**FINAL CONSIDERATIONS**

Knowing the profile of those assisted in a Specialized Care Service in STD / AIDS is important, since Porto Alegre has high rates of infected people. In this study, it was observed that the majority of users who seek care at the Specialized Care Service for
STD/AIDS occurred within a 24-hour period. This shows a concern after sexual exposure, when individuals choose not to use condoms, assuming the risk of infection.

Based on the results found, it was observed that men are the ones who are more exposed to sex, the preferred route during sexual practice for both sexes is the vaginal route, followed by the anal route and in lesser number the oral route. In view of the results obtained, there is a need to implement measures to help raise awareness of prevention and to carry out all stages of follow-up after sexual exposure, as some patients have reoccurred and returned to the SAE to start new monitoring.

The active search for exposed patients would be a suggestion to be adopted in relation to care, especially for those who do not complete and do not follow all stages of treatment. We emphasize the importance of the complete registration of data on the outpatient record at the first visit, in addition to the incorporation of data that are not included in the registry, such as telephone number for contact and education, which may facilitate the location, approach and understanding of the importance of the returns for monitoring.

REFERENCES
