# ARTÍCULOS ORIGINALES

MEDICINE COLLEGE OF THE FEDERAL UNIVERSITY FROM MINAS GERAIS, BRAZIL CENTER OF HEALTH PROMOTION FROM CONSELHEIRO LAFAIETE, MG, BRAZIL

# HIV/AIDS in the small cities: a Brazilian epidemiology study

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#### **SUMMARY**

Analyzing social, behavior and morbidity data of serum-positive individuals to the test anti-HIV in a Brazilian town city, they were detected: diffusion of the virus of the human immunedeficiency by via heterosexual, in epidemic profile similar to the HIV/AIDS appearance time in the world economically underdeveloped; change of sexual behavior from people when they notice they were involved with HIV; importance of the access to the attendance in the reduction of the morbidity of infected people with HIV and for the transmissibility of this disease in the community. The affected population was between 20 and 49 years and lower socioeconomic level, where the illicit use of drugs was not a risk event, the use of alcoholic drink was an important prominence. The morbidity owed HIV was from low seriousness to moderate one and the answer to the treatment was excellent, with just few collateral effects. Pregnant women had access to the treatment when they were still in good health conditions, but with levels of significant viral load for the vertical HIV transmission.

Key words: Syndrome of Acquired Human Immunedeficiency/ epidemiology, HIV/ profile of health, history.

The pandemia of the syndrome of the acquired human immunedeficiency related to the virus of the human immunedeficiency. HIV/AIDS has begun in the non-economically developed world, being transmitted the virus by heterosexual pathway and related to the sexual promiscuity.<sup>1-4</sup>

When the worsen injury arrived in the developed countries, it was noticed affecting people of socioeconomic level privileged in the great cities, mainly masculine<sup>1</sup> homosexuals firstly.

In the decade of 1990 the epidemiology profile of HIV/AIDS began to suffer transformations motivated by factors of political, social, economic, technological, cultural order, etc.<sup>5</sup> whose more notable modification was the new trajectory of the epidemic through the trail defined by the poverty and for the social delay, affecting a risk group formed by women, children, adolescents and heterosexual residents in small communities lacking

of appropriate assistance resources, far away from the great urban centers.<sup>6,7</sup>

This way, being characterized as one worsens emergent in the upcountry cities, HIV/AIDS became important to know with which epidemiology model HIV/AIDS is being expressed and tending inside of these communities.

Trying to collaborate for the construction of this knowledge, the study of the alive population serum-reactivates HIV assisted by the Center and Promotion of Conselheiro Lafaiete Health was provided, a micro-region pole inside the State of Minas Gerais, Brazil, from January, 2000 to December, 2001.

## **METHODS**

This research was developed in the national health clinic of the Service of Specialized

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Conselheiro Lafaiete is 100 km to the south of Belo Horizonte, capital of the Brazilian State of Minas Gerais, and it counted, in 2000, with 102.417 inhabitants.<sup>8</sup>

A questionnaire was applied to the alive serumreagents to HIV patients, whose data were analyzed in a context of a individual transverse scheme in observance, of periodic<sup>9</sup> prevalence.

#### RESULTS

Between January 01, 2000 and December 31, 2001, period of this research, the Center of Health Promotion from Conselheiro Lafaiete took care of 53 patients from a micro-region divided in 20 districts, where 288.231 inhabitants<sup>8</sup> resided, which gives a periodic prevalence of 18,388 individuals HIV/AIDS serum-positive for 100.000 inhabitants.

The heterosexual practice was the most probable form of people's HIV-infection (78,70 % of the cases), and the multiplicity of sexual partnership was identified in 51,35 % of the infected people.

In this case, the reason male-to-female was in 1,76:1,00 with 78,80 % of the cases in the age group between 20 to 49 years, when they were already diagnosed and receiving attendance.

### DISCUSSION

These individuals used to have occupations of smaller technical qualification, with low economic access and smaller educational level, confirming some epidemiologic paradigms on the HIV dissemination since the decade of 1990: the one of the provinciliasm, the one of the heterosexual activity, the one of the feminized cases and the one of the pauperism.

In relation to the HIV-infection decisive behavior, we found two moments in that the sexual attitude was different: the first one when the individual ignored that he/she was HIV serumpositive or sick because of AIDS, and the second moment when the individual started to know his/her situation of HIV serum-positive or sick with AIDS. In the first moment we saw the men living, more frequently, in sexual partnership multiplicity, not using preservatives in the sexual relationships, practicing the homosexuality or bisexuality, using drugs and ignoring their anti-HIV serology sexual partners'.

At the same time the women were living, more frequently, in monogamy, also not using preservative in the sexual relationships, not using drugs and ignoring the anti-HIV serology sexual partners' in 41,18 % of the times.

After they have been informed that they were HIV serum-positive, or they were sick with AIDS, as much men as women altered their behavior in the sense of the reduction of the risk of this disease transmission.

Under other aspect, an importance epidemiologic fact was not identified for the HIV parenteral transmission related to the illicit use of drugs. However, the use of the alcohol was an important facilitator of a contact to the HIV individuals serum-positive, mainly for those of the masculine sex, independent of the age group starting from the 12 years.

In the literature this aspect is very important among individuals socially helpless living in economically developed communities: that is to say, among the poor people from the suburbs from the big cities, mainly. 10,11

Indifferently to the sex, more than a half people has begun their treatment with CD4 leucocyte counting above indicative levels of serious immunedepression and counting of viral particles of HIV in levels that indicate a small probability of fast progression for Syndrome of Acquired Immunedeficiency, that is to say, a high CD4 leucocyte counting and lower HIV viral load.

This data is demonstrating that, although HIV transmissibility pattern inside Brazil seems to be in a similar direction to that one found at countries without social development since the beginning of the pandemia, the same doesn't seem to be happening with the access to the attendance from the infected individuals, at least in this study context.

The anti-retroviral polichemotherapy used, brought an important immunelogic and clinic recovery, or at least a stabilization, to the patients that had an opportunity to have access to the treatment and adherent to this therapeutic regimen.

The favorable therapeutic anti-retroviral impact was really accentuated in the first treatment semester, as much as in immunelogic and clinic improvement, as well as in terms of reduction of the measured viral replication through the counting of circulating HIV particles.

In relationship to the therapeutics toxicity, two collateral manifestations in relation to the antiretroviral use have happened, on the average, for patient in treatment, independently of the age group and of the sex.

They enrolled effects on the hematopoiesis, on the digestive system, on the metabolism, on the nervous system, the skin and its enclosures and on the urinary apparel, but, in any case, the interruption of the treatment was not necessary.

Eighty seven percent of this events have happened in the first two years of the therapeutics.

These information certainly are limited for the time of well-known treatment of the group of studied subjects, once, in this casuistry, there were just three individuals (6,38 %) in treatment more than 3 years.

Finally, HIV and its clinical and therapeutic implications in the pregnant women were not different than those observed in another people.

Going through the ways that offer it smaller resistance, HIV spreads itself through the ecological niche of the ignorance, the poverty and the women social subvalorization, using the heterosexual ways and the alcoholism collaboration.

However, the opportunity of access to the attendance provided to those infected produces exciting therapeutic results, besides inducing these individuals to the safer sexual practice against the transmission of this disease.

### RESUMEN

Se detectó al realizar el análisis de los datos sobre la conducta social y morbilidad de los individuos encontrados seropositivos en una prueba de VIH realizada en una pequeña ciudad brasileña lo siguiente: diseminación del virus de inmunodeficiencia humana por la vía heterosexual; perfil de la epidemia similar al del momento de la aparición del VIH/SIDA en el mundo

subdesarrollado; cambio de la conducta sexual en las personas cuando se dieron cuenta de que tenían el VIH; la importancia del acceso a la atención de salud en la reducción de la morbilidad de los individuos afectados con el VIH y de la transmisibilidad de esta enfermedad en el seno de la comunidad. La edad de la población afectada osciló entre los 20 y los 49 años y presentó un bajo nivel socioeconómico donde el uso de drogas ilícitas no constituyó un factor de riesgo, si bien el consumo de bebidas alcohólicas fue predominante. La morbilidad por VIH fue de menos crítica a moderada y la respuesta al tratamiento fue excelente, registrándose pocos efectos colaterales. Las embarazadas tuvieron acceso al tratamiento cuando todavía disfrutaban de un buen estado de salud, pero con niveles significativos de carga viral para la transmisión vertical del VIH.

Palabras clave: Síndrome de inmunodeficiencia humana adquirida, epidemiología, VIH, perfil de salud, historia.

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