

Evaluation of Depression in HIV/AIDS Patients Referring to Behavioral Counselling Center of Imam Khomeini Hospital

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Abstract- HIV/AIDS because of its transmission methods has cultural, social and psychiatric impacts on patients especially in Islamic countries. We investigated depression frequency in an Iranian referral center for HIV/AIDS patients. All patients attending the counseling centre of Imam Khomeini Hospital during 2006 and 2007 who agreed to participate were enrolled. Depression was measured by Beck Depression Inventory-II (BDI-II) questionnaire. Patients with score 15 and above were considered depressed. 199 patients (27 female; age 37.9 ± 9.5) filled the questionnaire. BDI-II scores 13 and above and 15 and above were detected in 74/1% and 71/7% of patients, respectively. We observed statistically significant relationship between depression (as defined by BDI-II score ≥ 15) and CD4 count, duration of diagnosed seropositivity, history of depression in the patients and his/her family, imprisonment, job status and education level. The relationship between depression and addiction was not statistically significant. The observed frequency of depression in our study (74%) is one of the highest ever reported. we recommend regular psychiatric visits for these patients in Islamic countries.

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Key words: Depression, HIV, AIDS, Iran, questionnaires

Introduction

According to a recent WHO report, by the end of 2006 approximately 5 million HIV positive people were living in the world (1).

They reported 8.6 million HIV positive patients in 2006 in Asia (1).

Prevalence of HIV in Asia was mostly among injecting drug users, but nowadays the number of people getting infected by sexual activities is increasing in these countries (2).

Depression incidence has been reported high among HIV/AIDS patients with rates between 36 and 50% (3-5,8).

Depression causes hygienic inobservance, less tolerance on taking antiretroviral drugs, faster development to AIDS and finally death (9, 10). These people use less health and mental services (11, 12), whereas curing depression increases the tolerance against HIV treatment and also the hope for life (11-14).

Considering the substantial differences between cultural beliefs in religious and secular countries we hy-

pothesize that frequency of depression in HIV/AIDS patients in Islamic countries might be different from that of western countries. This study was designed to evaluate depression frequency in Iranian HIV/AIDS patients.

Patients and Methods

All HIV/AIDS patients referring to Behavioral Consultation Center of Imam Khomeini Hospital (a both referral and first visit center) who agreed to participate during 2006 to 2007 were enrolled.

After brief explanation of the objectives and gathering demographic data the patients were given BDI II questionnaire to fill in a private place.

BDI-II is a questionnaire for depression measure that is quantitative (has 21 items) and is translated and standardized in psychiatric measure. It is used when time is short and the physician cannot evaluate the patient by DSM IV criteria for depression diagnosis.

In an Iranian study, score ≥ 15 was suggested as depression diagnosis threshold for Iranian people (6). Therefore, patients with scores ≥ 15 and ≥ 28 were con-

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sidered as depressed and severely depressed, respectively. Independent variables consisted of age, sex, marital status, history of imprisonment, education, life style, employment, transmission ways, duration of infection, CD4 count, highly-active antiretroviral treatment (HAART) consumption, HBV co-infection, HCV co-infection, history of admission, regularly visits, drug addiction, having children, history of depression and history of depression in family.

Inclusion criteria: attending the counseling center of Imam Khomeini Hospital between 2006 and 2007, and agreeing to participate in the study.

Exclusion criteria: being very ill or very poor prognosis, being unable to write and read.

Statistical analysis

Bivariate analysis was done by chi-square and independent samples *t*-test or Mann-Whitney where appropriate. Logistic regression analysis was used for all variables with *P* value < 0.25 on bivariate analysis and influential variables based on prior studies.

Backward selection model was used to eliminate insignificant variables.

Results

205 patients agreed to participate. 6 patients did not complete BDI-II questionnaire properly and were excluded from analysis. Data on the remaining 199 patients is presented in Table 1.

Regarding marital status; single, married, divorced and widowed statuses were present in 47%, 23%, 16% and 4% of patients, respectively. 80.4% were living with their family, 8% with friends, 0.5% in shelter houses and 8.5% were homeless.

Their self reported method of acquiring HIV was injection drug use (IDU), sex, blood transfusion, contaminated tools and multi transmission ways is 57.8%, 21.6%, 10.4%, 15.1%, and 5%, respectively.

110 people (55%) were drug users. The method of drug use was IDU (55%), inhalation (13.7%), oral consumption (8.8%), and multiple ways (27.5%).

In BDI-II questionnaire score 13-28 (mild to moderate depression) was present in 152 patients (76.4%) and score ≥ 28 (sever depression) in 86 patients (43.2%).

Figure 1 shows percentage of depression and severe depression in patients according to different cut off points.

Employing 15 as the recommended cut off point for diagnosing depression in Iranian patients (23), 71.7% of

HIV/AIDS patients were diagnosed as depressed (Figure 1).

Table 2 shows comparison of depression frequency in patients based on different demographic variables. In bivariate analysis variables occupation, education years, duration of HIV seropositivity, CD4 count, history of imprisonment and the history of depression in patients and/or their family were associated with depression status while in the logistic regression analysis only the employment, history of depression in the patient and/or in the family were statistically significant predictors of depression status.

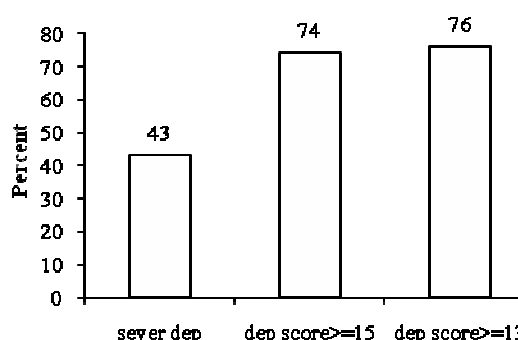


Figure 1. Percentage of depression and severe depression in patients

Table 1. Patients' characteristics

Variable	N(%) or mean \pm SD.
Sex (female)	27 (13.6%)
Age (years)	37.9 \pm 9.5
Education (years)	8.8 \pm 3.3
Unemployed	132 (66.3%)
Regularly visited	151 (75.9%)
Duration of infection (months)	3/2 \pm 3/5
Hx of imprisonment	128 (64.3%)
Addicted	150 (75.4%)
HBV co-infection	30 (15.1%)
HCV co-infection	107 (35.2%)
HAART consumption	88 (44.2%)
Hx of depression in the patient	108 (54.3%)
Hx of depression in the patient family	70 (32.2%)
CD4 count	321.1 \pm 237.08

Hx: medical history

Table 2. Comparison of depressed patients (BDI score >15) HIV/AIDS patients based on different categories of demographic variables

Variable	Yes ¹	Number (%)
Female sex	24 (89)	123 (71)
Employed*	44 (66)	103 (18)
Regularly visit ²	115 (76)	30 (68)
Hx of imprisonment	98 (77)	45 (69)
Addiction	112 (75)	35 (71)
HAART consumption	64 (73)	73 (74)
Hx of Depression*	89 (82)	81 (66)
Hx of depression in family*	60 (80)	81 (66)

¹Data are represented as Number (%), the number and percentages are numbers and percentages of depressed patients within each category of the variables. ² at least one visit in every two months.

*statistically significant in logistic regression model ($P < 0.05$). Hx:medical history

Discussion

The estimated prevalence of depression in adults is 7-12% in men and 20-25% in women in the world (6), while it was reported 4.3% in 2003 in Iranian population (7). Considering the fear of death and the current incurability of HIV/AIDS, together with its social stigmata in many cultures; the rate of depression in HIV/AIDS patients is much higher and this has been confirmed in several studies with frequencies around 36-37%.

Regarding the social unacceptability of extra marital sex in Islamic cultures, it was believed that depression frequency can be higher in HIV/AIDS patients in such cultures. The 72% frequency of depression in this series is one of the highest reported ones. This might be explained by the great religious and cultural differences between Islamic and western countries regarding sexual issues.

Employment (12, 15), CD4 count (12, 17), education level (8), and homelessness (8, 15) have been related to depression in the literature, while drug using (8), age (8) HAART consumption (8, 20), and regular visits (2) were not found to be related to depression. Our study seems to agree with these studies.

We think that by encouraging the society to provide education grounds for HIV/ADS patients and by encouraging families to accept their HIV/ADS patients, the frequency level of depression can decrease in these patients.

Decreasing the depression severity can help patients with their compliance to HAART and their CD4 count (11, 13, 14), as it has been reported previously

(17). In conclusion, regarding the high frequency of depression in our patients, we think that depression should be strongly considered and treated in every HIV/AIDS patient in Islamic cultures and we recommend providing psychiatric services in HIV/ADS clinics in such cultures.

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