

Original Article**RATIONAL DRUG USE AND COMPLIANCE IN PATIENTS WITH HIV / AIDS**

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Abstract**Background:**

According to rational drug use, the term of Compliance is to comply with all determined recommendations related to the treatment of patients and taking an active role in this process. Compliance is an indispensable component of drug therapy. furthermore, it provides the highest percentage benefits from drug on the other hand, lack of compliance causes failure of treatment . There is direct relationship between rational drug use and compliance. In our study, our goal is to investigate the rate of compliance in HIV-infected patients initiating antiretroviral therapy

Methods:

In our hospital, 184 HIV/AIDS patients admitted to Infectious Diseases and Clinical Microbiology polyclinic from 1 January 2006 to 31 December 2010. 142 of 184 AIDS patients with CD4 lymphocyte count 350 mm^3 and started HAART (highly active antiretroviral therapy) were examined . Patient's age, gender, CD4 cell counts, antiretroviral therapy and its side effects were analyzed from their following files retrospectively.

Conclusion:

The most important aspect of being successful in the treatment is the rational drug use. Although all our patients were described the importance of adherence to treatment, they are not enough responsibility to drug use (self-withdrawal drug) and compliance problem caused by adverse / side effects of drug (diarrhea, nausea, vomiting) was observed in our study.

Keywords: Rational Drug use, Compliance, HIV

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Introduction

World Health Organization - WHO defines Rational Drug use as personal clinical findings and appropriate medication according to individual characteristics, the appropriate dose, duration, the lowest price and easily accessible. According to Rational Drug use, the term of compliance is to comply with all identified recommendations regarding treatment of the patient and take an active role in this process (1). Compliance is an indispensable component of drug therapy and provides the highest benefit from the drug. In this context doctor, pharmacist, patient cooperation is very important. Rational drug use is firstly thought that a combination of different disciplines with compliance. Lack of compliance results in treatment failure. There is a direct relationship between rational drug use and compliance (2). Based on this concept, aim in our study is determination of the rate of compliance to treatment in HIV-infected adult patients initiated antiretroviral therapy, living in the city center of Istanbul. In these patients, occurred incompliance means directly to treatment failure. Even skipped single dose affects adversely the treatment success.

Materials and Methods

Study Design:

In our hospital, 184 HIV/AIDS patients admitted to İstanbul Haseki Training and Research Hospital Infectious Diseases and Clinical Microbiology polyclinic from 1 January 2006 to 31 December 2010. 142 of 184 AIDS patients with CD4 lymphocyte count below 350 mm^3 and had started HAART (highly active antiretroviral therapy) were examined. In the first admission of patients to the clinic; age, gender, educational status, possible transmission routes of HIV infection, whether additional disease, used drugs additionally, smoking, alcohol and illegal drug use, the patients'

physical examination findings, CD4 lymphocyte counts, HIV RNA levels, biochemical, and serologic test results are recorded to patients' files. After initiation of antiretroviral therapy, drug side effects and drug compliance are stated in patients' files by asking the patient as well as considering laboratory values and being questioned with the patient again.

While HAART compliance is investigated, epidemiological, clinical, laboratory and drug side effects for patients were evaluated retrospectively from the patients' files in our study. The obtained information was evaluated using IBM SPSS (Statistical Package for Social Sciences) 20 statistical program with descriptive statistics and Eta correlation coefficient test.

Results:

142 of 184 followed AIDS patients with CD4 lymphocyte count below 350 mm^3 were started HAART therapy (highly active antiretroviral therapy). Both 34 of these 142 patients using tenofovir + emtricitabine (TDF + FTC) containing regimens and 16 of these 142 patients using zidovudine + lamivudine (ZDV + 3TC) containing regimens were using lopinavir / ritonavir (LPV / r)- containing regimens additionally as 50(35%) patients totally. Both the remaining 82 of 92 patients (65%) using TDF + FTC and 10 of 92 using ZDV + 3TC were under efavirenz (EFV) treatment. Patients' incompliance rates and reasons to recommended treatment regimen is given in Table 1. 3 of 12 patients (25%) who terminate drug use on one's own, bored of drug use, deny illness were alcohol / illegal drug users. 16% significant but at low levels ($p < 0.05$) relationship was found between drug incompliance and the number of used daily tablets.

In HIV / AIDS patients, features that affect compliance to HAART use and its statistical evaluation are presented in Table 2.

Recommended HAART	The number of daily tablets	The number of patients	The number of in compliance patients to drug	Cause of in compliance
ZDV+3TC+LPV/r,	6	16	1 1	Diarrhea, nausea and vomiting
ZDV+3TC+EFV	3	10	-	
TDF+FTC+LPV/r	5	34	3 1 1 1 1	Self -request Diarrhea Bored of drug use Denial of illness + diarrhea impotence
TDF+FTC+EFV	2	82	7 2	Self- request loss of social security

Patient's feature	The number of incompliance patients to drug	The number of compliance patients to drug
Gender		
female	3	29
male	15	95
Average CD4 lymphocyte count	222.44	330.16
The presence of concomitant diseases	3	139
Additional drug use	1	141
Existence of side effects of HAART	9	133
Control of the side effects of HAART	5	137
Alcohol / drug use	3	139

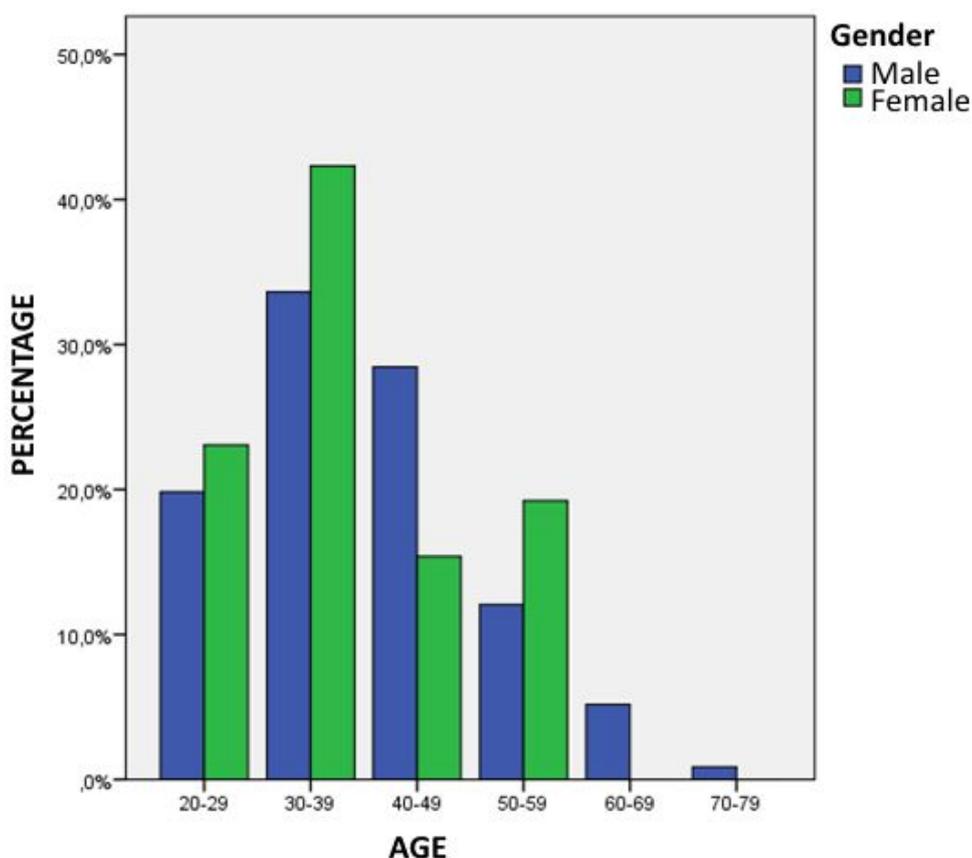
The study includes data between the years 2006 and 2010.

Gender	N (of number)	%
female	26	18
male	116	82

142 people were included in the study and 26 of them are female, 116 of them are male

	The Youngest	The Oldest	Average
Age	20	79	39.51

The youngest individual in this study is 20 years old ;however.the oldest one is 79 years old.Moreover, the average age of 142 individuals is approximately 40.



We can also see summary of 142 individuals' percentage related with their sex and age in the study above mentioned bar graph. Age of the individuals included in the study generally ranges from 30 to 39 years and more than 40% of them are women.

	Shortest	Longest	Average
Drug Use Duration	1	63	21,60

Drugs were used at least 1 month up to 63 months considering 142 individuals' duration of drug used and drug were used 22 months approximately. HIV / AIDS is still one of the most important areas of medicine that are helpless despite initial rapid growth. Moreover, vaccine studies and new drug groups are promising. Patients' expectancy of life and patients' quality of life can be improved with proper and regular treatment significantly (13).

However, if the patient's compliance to treatment isn't achieved, it may cause negative results. We found compliance problems at a rate of 10.5% in 142 patients in our study. HIV / AIDS, which is first described since 1981 has been one of the most extensively studied infectious diseases (14). HIV / AIDS is a disease that threatens not only some countries or a region, but also entire world. In our country it is remarkable disease due to increased in recent years (15). HIV / AIDS is defined as a long process and difficult to follow (16). Of course , access to the drug is important. When antiretroviral drugs compared with different treatments, combination treatment with the multiple drug regimens for the treatment needed and highly expensive drugs to be taken in terms of pharmaco-economic, is one of the important obstacles for treatment. Indeed, one patient with no social security terminates treatment lack of providing the drug due to financial power. Termination of drug use in HIV patients means also is totally treatment failure.

The most important factor of being successful in HIV treatment is rational drug use.

Conclusion

The most important aspect of being successful in the treatment is rational drug use. Our patients who have problems with compliance due to firstly not inadequate information for drug use (self-withdrawal drug) and compliance problem caused by adverse / side effects of drug (diarrhea, nausea, vomiting), compulsory drug discontinuation due to social security were observed in our study. In terms of rational drug use, behavior of compliance to given treatment

and to drug were found at a rate of 10.5% in HIV-infected patients. This means that Compliance issues related with rational drug use can be resolved with handling subjects about increasing patient's knowledge and awareness about pharmacoeconomics, pharmacovigilance, disease and drug urgently especially in AIDS infected patient groups. Enhancement of rational drug use training programs and provision of health services and missed opportunities during the assessment can be said that the important and necessary.

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