A STUDY ON PATIENTS' ADHERENCE TO *ARV* TREATMENT

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March, 2005

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Acknowledgement

We would like to express our sincere thanks to Dr. Kokila Shrestha, Director, & Dr. Sushil Kumar Shakya. Sahid Sukra Raj Tropical and Infectious Disease Hospital for their co-operation and support to carry out this study.

Our thanks are also due to Dr. Shiv Bahadur Karkee, member PHON, for his valuable contribution. and Ms. Anupama Pradhan. research assistant for data collection.

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EXECUTIVE SUMMARY

A study was conducted with the objective of assessing the adherence of patients to the antiretroviral therapy (ARV). It was conducted in Sahid Sukra Raj Tropical and Infectious Disease Hospital (Teku, Kathmandu) from 1st August to September 15th, 2004. All 30 patients who visited the hospital during that period were studied. The data was collected by exit interview using structured questions and WHO indicators.

There were 18 males and 12 females, and 29 of them were receiving AZT + 3TC + NVP combination. Only one patient was receiving NVP + 3TC + d4T combination. Sixty - seven percent of patients received all prescribed drugs from the hospitals, but none of the dispensed drugs were adequately labelled. All patients correctly reported the knowledge of dosing and all patients were fully adherent to the treatment. Adverse effects were encountered in 30 % of patients.

INTRODUCTION

In south Asia, there are more than 7.1 million people living with HIV/AIDS. In Nepal. the first case of HIV/AIDS was diagnosed in 1988. The Number of HIV infected persons is gradually increasing every year. The major mode of transmission is heterosexual. There is high prevalence of HIV in high-risk group such as injecting drug users and female sex workers. Currently, it is estimated that there are more than 60,000 people living with HIV/AIDS in Nepal with an estimated 3,000 deaths (2002) annually.

The goals of Antiretroviral (ARV) therapy in Nepal are- reduction of HIV-related morbidity and mortality, maximal and durable suppression of viral load, restoration and/or preservation of immunologic function and improvement of quality of life of HIV infected persons.

The National Guidelines on ARV has recommended combination therapy. Twenty five patients were receiving free drugs from the government hospital (Teku Hospital) at the time of the study. The regimens of medications for adults and adolescents are as follows:

First Line:- AZT (Zidovudine) + 3TC (Lamivudine) + NVP (Nevirapine)

OR

AZT (Zidovudine) + 3TC (Lamivudine) + EFZ (Efavirenz).

Second Line:- d4T (Stavudine) + ddI (Didanosine) + rtv enchanced PIs (Lopinavir)

OR

d4T (Stavudine) + ddI (Didanosine) + NVP (Nevirapine)

A high degree of adherence to ARV drugs is necessary for optimal virological suppression. Studies indicate that 90-95% of the doses should be taken for optimal suppression and lesser degrees of adherence are more often associated with virological failure. Adherence should be assured at initiation of antiretroviral therapy.

Non-adherence is defined as not taking all (minimum of 95%) of the prescribed medications at the prescribed times over the treatment period. If there is non-adherence the drug regimen must be discontinued.

Re-starting of drug regimen is dependent upon the patients resolution of non-adherence issues.

OBJECTIVES

The overall objective of the study was to assess the adherence to the given treatment by the patient.

The specific objectives of the study were to find out:

- patient's knowledge of dosing of ARV drugs.
- adverse effects encountered in the patients.
- use of drugs as prescribed
- methods used for providing information on drug use

METHODOLOGY

The study was conducted in Sahid Sukra Raj Tropical and Infectious Disease Hospital (Teku, Kathmandu). Using exit interview with ARV patients who visited the hospital from August 1st to September 15, 2004 collected the data. All patients who visited the hospital during the study period were interviewed. The number of patients was thirty.

Structured questions were developed and field-tested before finalization. The data was collected by a pharmacist who was trained for use of instrument and data collection.

WHO indicators. Patient's Knowledge of Dosing and Adequate Label were also used for data collection.

SECONDARY CODING

Collected data were coded based on knowledge and practice using following WHO indicators :

Patient's Knowledge of Correct Dosage: Percentage, calculated by dividing the number of patients who can adequately report the dosage schedule i.e. at least when and how much should be taken for all drugs, by the total number of patients interviewed, multiplied by hundred.

Percentage of Drugs Adequately Labeled: Percentage, calculated by dividing the number of drug packages containing at least patient name, drug name and when the drug should be taken, by the total number of drug packages dispensed, multiplied by hundred.

DATA ANALYSIS

The data were analyzed manually.

RESULTS

Out of 30 patients. 12 were females and 18 were males. The age distribution of patients was between 23 - 46 years. The patients were receiving treatment for a period of 15 days to 15 months. Twenty-nine patients were receiving Zidovudine (AZT) + Lamivudine (3TC) + Nevirapine (NVP) combination. Only one patient was receiving NVP + 3TC + Stavudine (d4T). However. the patient who was receiving NVP + 3TC + d4T combination received AZT + 3TC + NVP for 8 months. One of the 29 patients receiving the present combination was on AZT + 3TC + Efavirenz (EFZ) for 5 months. The reasons for change/ discontinuation of combination therapy were due to severe anaemia. rash and some other side effect. Twenty patients (66.7 %) received all prescribed drugs from the hospital. But none of the dispensed drugs were adequately labelled (Table I-III).

The knowledge of dosing (including when and how much of all prescribed drugs) was correctly reported by all patients. Five patients were unaware of duration of treatment when they were coming out of the hospital. All patients were fully adherent to the therapy (Table IV).

Adverse effects were encountered in nine patients (30%). The adverse effects included severe anaemia. drug allergy. bleeding from nose. gastric upset and brown discoloration of skin. One adverse effect encountered with combination-I and similarly the adverse effect encountered with combination III were not recorded by the data collector (Table III).

Table I: Distribution of study population by age and sex.

Age	Male	Female
20-30	7	8
31-40	7	3
> 40	4	1
Total	**18**	**12**

Table II: Distribution of patients by treatment period and type of combination therapy.

Period	AZT + 3TC + NVP (Combination I)	NVP+ 3TC + d4T (Combination II)	AZT + 3TC + EFZ (Combination III)
Less than 1 month	3	1**	0
1 - 6 months	16	0	1*
6 - 12 months	8	0	0
12 - 18 months	1	0	0

* Received the combination for 5 months.

** Receiving the combination for 15 days only.

Table III: Side effects encountered and change of regimen

Combination	Side Effects (Number)	Reason for change of therapy/ discontinued therapy
Combination I	Severe anaemia (2), drug allergy(3), bleeding from nose and gastric upset (1) and brown discoloration of skin(1)	Severe anaemia (1) Side effect (not recorded)
Combination II	not encountered	-
Combination III	encountered	Not recorded

Table IV: Patients knowledge of dosage & adherence to therapy

When (%)	How much (%)	Knowledge on Duration (%)	Adherence to Therapy (%)
100.00	100.00	83.00	100.00

CONCLUSIONS/ RECOMMENDATION

- There is adequate knowledge on dosing of prescribed drugs.
- The side effects of the combination are monitored and treatment regimen is changed .
- There has been full adherence to ARV therapy. However, for ensuring full adherence to long term treatment adequate labeling will be important method.

REFERENCES

1. National Guidelines on Anti-Retroviral (ARV) Therapy. MOH. 2004
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