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HIV INFECTION;
PREVALENCE AMONG INTRAVENOUS DRUG USERS

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ABSTRACT... Background: Human immune deficiency virus (HIV) infection was a major health problem all over the world. The infection had become pandemic and no country was immune. The main burden of disease was shared by developing countries and their crippled economies were unable to deal with it. As a result the number of HIV patients were increasing day by day. Treatment was expensive and preventive measures were not effective. The intravenous drug users (IDUs) were major contributors in its spread. **Objectives:** To assess the prevalence of HIV infection by determining the frequency of HIV infection in intravenous drug users. **Study Design:** Cross-sectional study. **Place and duration of study:** Rehabilitation center for IDU,s in District Headquarter Hospital Faisalabad (DHQ), a Tertiary Care Hospital, Affiliated with Punjab Medical College during Jan.2013 to Dec.2013. **Subjects and Methods:** All I. V. drug users attending the rehabilitation center of D.H.Q. hospital were included in the study. All were subjected to be screened for HIV/AIDS infection. Total 352 patients attended the center. Each patient was given a code number to hide the identity and results of tests were kept secret. The blood samples were collected and labeled with respected code on it. **Results:** Total 352 intravenous drug users were enrolled at rehabilitation center and 96 were tested positive for HIV infection. Another 62 belonged to urban area and 34 belonged to rural area. About 80 were living with their families and 16 were living out of their families. The 78% were not having sufficient earnings for their living. **Conclusions:** Intravenous drug users were threat to public health in transmitting HIV infection by sharing needles.

Key words: HIV, INFECTION, AIDS, IDU,s.

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INTRODUCTION

Human immune deficiency Virus (HIV) was the virus that only infected humans. The immune system of the body was made defective or paralyzed particularly the CD4 population of white cells[1]. The first case was detected in 1981 in West Central Africa[2]. When the signs and symptoms of the disease reach the final stage it was labeled as Acquired Immune Deficiency Syndrome (AIDS)[3]. Acquired ,because it was contacted after birth and it destroyed the immune system of the body. Syndrome was the collection of signs and symptoms of the disease. There were certain boy fluids helping in their transmission whenever contacted by other persons. Those were blood ,Semen, Breast milk, Vaginal fluids, Rectal/Anal mucosa, Amniotic fluids, CSF, Synovial fluids, and other wastes like feces, nasal fluids, saliva, tears, urine, sweat and vomitus etc[4].The antiviral drugs were tried to control the virus. Mono therapy was started initially in 1981but was not successful. In 1992 Samuel Broder declared it a chronic disease and started cocktail of anti-viral drugs and three anti-viral drugs were started[5]. There were reports that with new anti-viral drugs people could live for decade with HIV if not developed AIDS[6]. According to WHO reports the incidence of the disease was 50,000/year and97% of the infected population belonged to low income countries[7]. The disease started with a brief flue like symptoms and gradually became asymptomatic. The problem started when the immune system became so defective that opportunistic infections and tumors those did not infect people in normal circumstances, started producing diseases. The people using IV drugs for addiction commonly share the needles and were at highest risk of developing HIV infection. The District Headquarter Hospital Faisal Abad (D.H.Q.) was the second largest tertiary care hospital in the city. It has a 1027 beds facility for patients. There was a special unit established in the hospital that provided expertise

for rehabilitation of IV drug users. Anti-viral drugs were expensive and beyond the reach of poor patients. The poor nations could not provide any financial assistance to help the victims of that disease. The burden of disease was piling up all over the world. Efforts were being made to develop vaccine and hopefully in near future we might have one. The statistics showed that 36 million deaths have occurred until 2012 since the discovery of AIDS and about 35.3 million have HIV infection globally[8].The infection had become pandemic by its existence in large parts of the world. The other two were Malaria and Tuberculosis. The statistics showed that mortality ratio with those two diseases were decreasing and mortality with HIV/AIDS was increasing gradually[9]. There were many misconceptions regarding the HIV. It was a source of discrimination in public; many wrongly believed that it could spread by shaking hands with victims. The economic impact was also tremendous. The financial burden was 300 million Dollars in 1996 and had increased to 13.7 billion dollars in 2009. Another problem was unequal distribution of funds as non-communicable diseases (NCD,s) were responsible for about 80% deaths but only 3% funds were allocated by donor agencies[10].There was no infrastructure developed in most of the developing countries to deal with HIV patients in hospitals and to rehabilitate them. Pakistan is the third largest Islamic state and is surrounded by three HIV high risk countries, India, Afghanistan, China and only one low risk country, Iran. WHO had established 17 centers for the rehabilitation of IDU,s in different parts of the country and it was estimated that 150,000 patients had been registered with 95% success rate[11].

METHODOLOGY

All the patients with the habit of using intravenous drugs for non- therapeutic purpose and willing for rehabilitation process were included in the study. Any non-willing patient was excluded from the study. Each patient was allotted with a code number that was kept secret from doctor and the patient. A consent form was signed by each patient giving permission for HIV test and rehabilitation procedures. Patients were asked for their family status, socioeconomic background and area they belonged to. Rapid screening test was applied for HIV infection that was confirmed by ELISA test later on. As HIV infection should be notified to health department immediately so data was transmitted to AIDS control center in Director General Health Punjab office. It was a cross-sectional study conducted at DHQ hospital that is a tertiary care hospital during January 2013 to December 2013.

RESULTS

HIV status	IDU	%age
HIV +ve	96	27.27%
HIV - ve	256	72.73%
Total	352	100%

Table-I. Prevalence of HIV +ve

Area	No. of patients	%age
Urban	62	64.58%
Rural	34	35.41%
Total	96	100%

Table-II. Area background of patients

Status	Frequency	%age
Family	80	83.33%
Single	16	16.66%
Total	96	100%

Table-III. Family status

	Numbers	%age
A*	75	78%
B*	21	22%
Total	96	100%

Table-IV. Monthly income status
**A = monthly income upto 15000Rs*
B= monthly income more then 15000Rs

Total 325 patients attended the rehabilitation center with the history of non-therapeutic intravenous drug use. Out of those 96(27.27%) were tested positive for HIV infection. Table-I. Regarding the areas they belonged, 62(64.58%) were living in urban areas while 34(35.42%) in rural areas. Family status was also asked , 80(83.34%) were living with their families and 16(16.66%) were living alone. The economic status was also considered. About 75(72%) were having income up to Rs.15000/

month and 21(28%) were having income more than Rs.15000. Generally the majority of patients belonged to poor socioeconomic status.

DISCUSSION

Intravenous non-therapeutic drug users were a source of spreading different diseases in public particularly the HIV/AIDS. It was established in the study that out of 352 patients 96(27.27%) were tested positive for HIV infection. They all gave the history of sharing needles frequently with other IDUs. Hardly anyone knew about the mode of spread of HIV infection by that rout. The percentage of infection was alarming for the health care workers. Similar studies were conducted in different parts of the world. According to UNAIDS nearly 4.5 million were intravenous drug users and out of those 16% were tested positive for HIV infection in Asia alone[12]. Majority among them did not know about HIV infection. There were estimated 33.4 million people living with HIV infection worldwide. The annual incidence rate was 50,000/year. About more than 2.5 million people had died worldwide with HIV/AIDS[13]. According to WHO report majority had no access to treatment[14]. In Asia, no case was reported of HIV until 1980 but in mid-1990s it had become an epidemic. In a report of UNAID nearly 370,000 new cases were added in 2011 to the total of 5 million AIDS patients and 310,000 had died due to AIDS[15,16]. The statistics among other countries in Asia were alarming particularly in Southeast Asia. In Thailand 490,000 were reported having AIDS and 30-40% among them were IDU[17]. In India 2.1 million were infected with HIV virus. In China, among 780,000 HIV patients, majority were intravenous drug users[18]. In Indonesia, which is the fourth populous country in the world, 380,000 AIDS patients were reported by 2011 and nearly 36% were IDU. In Vietnam, the number of AIDS patients had doubled from 2000 to 2009 and 70% among them were IDU[19]. In Philippines, the statics were more threatening. The number of HIV patients had increased to 50% in 2012 to 2013 and majority among them were IDUs. The 45% of IDUs population of the world resided only in five countries ie, China, Vietnam, Malaysia, Russia and Ukraine. The prevalence of AIDS among IDUs was 75-83% in Russia and central Asian states, 45-72% in South East Asian countries[20]. The National AIDS Control and Prevention Program (NACP) were started in 1987 in Pakistan. It only focused the general population for screening of blood for HIV and health education and the high risk groups were neglected. The statistics in Pakistan showed that HIV infection epidemic was in second phase ie, prevalence among high risk groups had increased to 5%. There were 87,000 HIV patients reported until 2012 with 3,500 deaths. There were 150,000 IDU,s reported and the prevalence of HIV infection among them was 27%. It was also noted that 15-50% IDU.s belonged to larger cities of the country[21]. The study revealed that 64.58% IDUs belonged to urban areas and 35.42% belonged to rural areas. It showed that drugs were more frequently and easily available in cities as compared to rural areas. Table-II. It was also noted that 83.34% among IDUs were living with their families and were accompanied with their family members for their treatment. Only 16.66% were not living with their families. Table-III. The socio-economic status was also noted and it was revealed that 72% among IDUs were earning less than 15,000 Rs per month for their livings and only28% were having income more than 15,000 Rs per month.Table-IV Since the first case of HIV infection reported in Lahore in 1987, the prevalence of the infection had increased to 0.05% in general population compared to 1-2% prevalence in high risk groups[22]. There were seventeen rehabilitation centers working all over the country providing free of cost antiviral treatment and diagnostic facilities with estimated 95% success rate. Government had made a draft of national AIDS policy for the formulation of National AIDS council to involve multi-sectorial dimension and involving all provinces. The Enhanced HIV/AIDS control program 2003-2008 was aimed to decentralize (NACP) and to concentrate screening for HIV in most at risk population (MARPS) ie. IDUs and sex workers instead of general population. Total18 service delivery packages (SDPs) were covering IDUs in 7 cities and jail inmates in 5 cities[23]. There was urgent need to establish similar centers in the country. More finances and skilled workers were required to control the epidemic especially in high risk groups. No female IDUs were reported in the center but statics showed 8,900 female

were infected with HIV in Pakistan with male to female ratio of 42.6 to 7.1/100, 000[24]. It was estimated that nearly 90% HIV infected patients were registered in developing countries .The cost of treatment and diagnosis had risen from 300 million to 13.7 billion in 2009 globally and were increasing every year. In a survey conducted in Pakistan had established that HIV infection had increased from a level of low to concentrated level epidemic among IDUs.[25]. The Government and non-government organizations were working in slow pace and Government was not allocating enough finances for the control of infection. Only Canadian International Development Agency (CIDA) was providing assistance to HIV/AIDS surveillance project (HASP) in Pakistan both nationally and provincially to control AIDS and to continue work on second generation surveillance especially concentrated surveillance. The efforts were not sufficient to deal with HIV epidemic threat.

CONCLUSIONS

The prevalence of HIV infection had increased in general population as well as in high risk groups and intravenous drug users were one of the major contributors.

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