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**INDO AMERICAN JOURNAL OF
PHARMACEUTICAL SCIENCES**<http://doi.org/10.5281/zenodo.1423098>Available online at: <http://www.iajps.com>**Research Article****ANALYSIS OF AWARENESS OF HIV/AIDS-AS A GROWING
EPIDEMIC IN PAKISTAN****¹Dr. Nadeem Abbas, ¹Dr. Malik Muhammad Yousuf, ¹Dr. Muhammad Zubair Niaz****¹Medical Officer at THQ Hospital Jatoi****Abstract:**

HIV belongs to Lentivirus, which are also known as "slow virus". The name indicates their mode of action as they enter into the body and remain in it for a longer period of time. They have a unique property of inserting their information into the DNA of the host cell and also have the ability to replicate in non-dividing cells. Two types of HIV have been characterized; HIV-1 and HIV-2. HIV-1 is the most virulent and pathogenic strain. Worldwide, the predominant virus is HIV-1, and generally when people refer to HIV without specifying the type of virus they will be referring to HIV-1. The basic aim of the study is to analyze the prevalence and reasons of growing epidemics of HIV/AIDS in a Pakistani population. This study was basically conducted in a Pakistani population by designing a questionnaire. This was done during 2017 to 2018 with the help of different hospitals and different other departments of universities and hospitals. Basically, we designed a questionnaire to find out the reasons and prevalence of HIV/AIDS in the Pakistani nation. The prevalence of STDs is alarmingly high in Pakistan, especially in male individuals. Currently, the STD rate in men in urban areas of Pakistan is estimated to be 8.5% in Karachi, 5.3% in Lahore, 4.0% in Faisalabad, 4.3% in Quetta, 2.5% in Rawalpindi, and 2.0% in Peshawar. This is the common thought in the minds of Pakistani people that as an Islamic Republic, Pakistan is protected from HIV/AIDS. This is true that Islam is against pre-marital sex or extra-marital sex and also homosexuality, and this is a valuable barrier against HIV/AIDS. But still, there is a threat of prevalence of this disease in Pakistan.

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INTRODUCTION:

HIV belongs to *Lentivirus*, which are also known as "slow virus". The name indicates their mode of action as they enter into the body and remain in it for a longer period of time. They have a unique property of inserting the information into the DNA of the host cell and also have the ability to replicate in non-dividing cells. Due to these characteristics they are considered to be the most efficient gene delivery vector. HIV infects defense/immune system cells such as CD4+ T cells, macrophages and dendritic cells. The CD4+ cells play a crucial role in the maintenance of the immune system. After infection, HIV uses CD4+ cells as a host to make copies and infect other cells. This leads to the reduction of CD4+ cells in the body and the immune system totally collapses. The development from HIV to AIDS is checked by the rapid decline of CD4+ cells [1].

The Human Immunodeficiency Virus (HIV) infection is becoming a prevalent disease in Pakistan, and its death toll has been steadily increasing each year since 1987. Although nearly 100,000 individuals in Pakistan are living with HIV/AIDS, there are only 15,370 documented individuals suffering from this illness. The number of HIV/AIDS infections in Pakistan has been increasing at an alarming rate; from 2005 to 2015, the number of reported infections in Pakistan increased from 8,360 to 45,990 cases, the highest global average increase of 17.6% in history. Furthermore, the death toll has also been on the rise [2].

HIV is not currently a dominant epidemic in Pakistan. However, the number of cases is growing. Moderately high drug use and lack of acceptance that non-marital sex is common in the society have allowed the AIDS epidemic to take hold in Pakistan, mainly among injection drug users, some male sex workers and repatriated migrant workers. AIDS may yet become a major health issue. Pakistan has seen an eight-fold increase in HIV cases between 2001 and 2012, said a UN report on the eve of World AIDS Day [3]. The report calls for a rapid increase of voluntary confidential community-based HIV testing

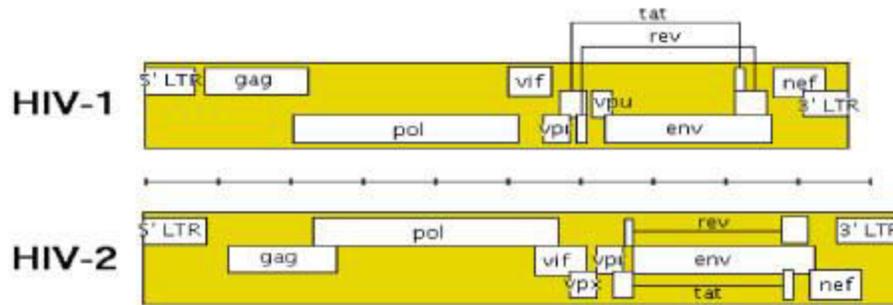
and counselling for populations at higher risk in the region. The report, 'HIV in Asia and the Pacific: Getting to Zero,' released by the Joint United Nations Programme on HIV/AIDS, says that emerging epidemics are becoming evident in 12 countries in Asia and the Pacific region, where an estimated 4.9 million were living with HIV in 2014 [4].

Types of HIV

Two types of HIV have been characterized; HIV-1 and HIV-2. HIV-1 is the most virulent and pathogenic strain. Worldwide, the predominant virus is HIV-1, and generally when people refer to HIV without specifying the type of virus they will be referring to HIV-1. The relatively uncommon HIV-2 type is concentrated in West Africa and is rarely found elsewhere. The reason behind this is that HIV-2 weakens the immune system slowly than HIV-1. The HIV-1 is further divided into 4-groups; a) major group M, b) Outlier group O, c) Group N, d) Group P. These groups have been identified in their envelope region. Group M is further divided into A, B, C, D, F, G, H, J and K. In Asian countries B and C are the predominant clades of HIV-1. But in Pakistan HIV-1 is dominant as compared to other clades, this was found more in IDUs in Karachi. HIV-2 has also 8 clades from A to H, out of these clades only A and B are epidemic [5].

HIV Virology and Life Cycle

The identification of HIV led to concentrated activity in the field of molecular virology. HIV is different in structure from other retroviruses. This is roughly spherical with a diameter of about 120 nm. It contains three (3) structural and six (6) genes which encode at least fifteen (15) viral proteins and control the ability of HIV to infect the cell. HIV is composed of two copies of positive single stranded RNA. The RNA is tightly bounded with nucleocapsid proteins and the essential enzymes for the development of virion such as; reverse transcriptase, proteases, ribonucleases and integrase [9].



Objectives of the study

The basic aim of the study is to analyze the prevalence and reasons of growing epidemics of HIV/AIDS in a Pakistani population.

METHODOLOGY OF THE STUDY:

This study was basically conducted in a Pakistani population by designing a questionnaire. This was done during 2017 to 2018 with the help of different hospitals and different other departments of universities and hospitals. Basically we design a questionnaire to find out the reasons and prevalence of HIV/AIDS in Pakistani nation. In this questionnaire we add some basic questions regarding HIV. We want to check the knowledge related to disease and its cure in people of different age group and different mentality. All the basic information was added in this questionnaire regarding diseases and its prevalence.

The total population of Pakistan is 168.79 million at the end of 2009 with an average annual growth rate of 1.9%. In the ranking of most populated nations; Pakistan stands at 6th position in the world. Pakistan is divided into four provinces viz., Punjab, Sindh, Khyber Pakhtunkhwa and Balochistan; two independent states of Azad Jammu Kashmir and Gilgit-Baltistan; and federal territories of Federal Administrated Tribal Area [FATA] and Islamabad. The most populated Provinces of Pakistan are Punjab and Sindh with high HIV/AIDS prevalence. The mortality rate is 64 per 100,000 live births with life expectancy at birth of 66 years. The literacy rate in Pakistan is 54% with 0.562 human development indexes and 0.537 gender development index.

Analysis of results

After collecting data through internet and through personal visits in different colleges, universities and

other common places we analyze this data and find out these some common reasons of HIV/AIDS in Pakistan as a growing epidemic.

Mentality and situation of Pakistan regarding HIV/AIDS

The prevalence of STDs is alarmingly high in Pakistan especially in male individuals. Currently, the STD rate in men in urban areas of Pakistan is estimated to be 8.5% in Karachi, 5.3% in Lahore, 4.0% in Faisalabad, 4.3% in Quetta, 2.5% in Rawalpindi, and 2.0% in Peshawar. The National AIDS Control Program conducted a study that found the infections rates to be as high as 60% amongst transgender and 36% amongst the male sex workers.¹⁶ Low awareness about protection against this deadly disease in poor and middle-class areas is increasing the number of incidents of STDs. These STDs are known to facilitate the sexual transmission of HIV/AIDS infection. The most at risk populations for transmission of HIV/AIDS infection in Pakistan are people who inject drugs (PWID), transgender persons, males, and female sex workers with a rate of 27.2%, 5.2%, 1.6%, and 0.6% respectively.¹⁸ According to Fleming and Wasserheit, there is strong evidence that new patterns of drug use and shifts to injecting in particular is an important factor contributing to the rapid increase of HIV infection among drug users [10].

The Reasons of High Vulnerability of HIV/AIDS in Pakistan

Although, HIV/AIDS prevalence appears to be low in Pakistan but there is need to establish some more accurate action plans for this. In Pakistan, the social structure and conditions include widespread poverty, significant power imbalance between men and

women, low level of education, and challenges in the areas of government and human rights [11].

Poverty

Poverty is a major development concern in Pakistan, and this is also a major facilitating factor in spread of HIV. Recent documentation suggests that poverty is increasing in Pakistan, about 36 million people living below the poverty line. The poor suffer not just limitations in income; they also lack basic facilities and amenities which allow for a full and meaningful existence.

Gender Inequalities

It may also play a significant role in the further spread of HIV/AIDS in Pakistan. Pakistani women in general have lower socioeconomic status, less mobility and less decision-making power than Pakistani men, all of which contributes to their vulnerability to HIV. Because of gender disparities in educational enrollment, the 35% of women are literate as compared to 59% of men in Pakistan [12].

Other Reasons

Against this backdrop of poverty, gender inequalities, and low literacy rate. The general public in Pakistan is vulnerable to HIV/AIDS due to several other common behavioral patterns and risk situations. For example, rarity of condom usage, unhygienic conditions and unsafe medical practices [13].

Role of Government

A few years ago, there was a commercial by a leading condom producing company promoting the use of condoms, the idea of protected sex, and the prospect of living better, healthier lives. The mere promotion of a contraceptive commercial stirred a significant controversy nationwide, and the PEMRA responded with banning the commercial immediately. In 2001, the Pakistani government developed a National HIV/AIDS Strategic Framework that established strategies for effective control of this deadly disease. In the following years, the government's biggest challenge was implementing this strategic plan, establishing effective partnerships, networking with the donors and NGOs, and neutralizing the stigma attached to HIV/AIDS. At least 45 non-governmental organizations (NGOs) were involved in the HIV/AIDS public awareness campaign. These NGOs supported and cared for the patients living with HIV; they focused on the population of sex workers in all four provinces of Pakistan. Although these NGOs are actively still working for the HIV/AIDS control in Pakistan, they are not enough in numbers to

control prevalence of HIV/AIDS in growing population of Pakistan [14].

CONCLUSION:

This is the common thought in the minds of Pakistani people that as an Islamic Republic, Pakistan is protected from HIV/AIDS. This is true that Islam is against pre-marital sex or extra-marital sex and also homosexuality, and this is a valuable barrier against HIV/AIDS. But still there is a threat of prevalence of this disease in Pakistan.

Future recommendations

The HIV/AIDS counseling and testing is the best way to prevent this disease in Pakistan. There should be availability and accessibility of antiviral treatment so that people suffering with HIV can enjoy better life. The government of Pakistan should play their role because the successful and comprehensive HIV prevention program needs political leadership as this will be very much helpful if political personalities talk about HIV/AIDS on public places. This is eleventh hour to take measures against this disease to save future of Pakistan.

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