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"Trends of HIV Seroprevalence in Women attending Out patient department: A Retrospective Observational Analysis study at a Tertiary Care Hospital in Kanpur, Uttar Pradesh."

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ABSTRACT

Background

HIV affects some groups more than others. Social and structural issues—such as HIV stigma, homophobia, discrimination, poverty, and limited access to high-quality health care—influence health outcomes and continue to drive inequities. The purpose of this study is to estimate the prevalence of HIV infection among womens attending ICTC, RMCH&RC, Kanpur, for a period of five years.

Materials and Methods

A retrospective observational analysis of 5 year data, from November2019 to November 2024, was conducted in the Department of Microbiology at the Rama Medical College and Hospital, Kanpur, Uttar Pradesh. The total sample size was 18,250 patients. All womens attending out patient in these 5 years were included in the study. All the patients were counseled and informed consent was taken from them by ICTC counselors. The data pertaining to the patients included name, age, occupation, education.

Results

Out of the total 18,250 womens tested for HIV infection, 48 (0.26%) were found to be HIV seropositive. Maximum HIV seropositivity was in the age group of 31-50 years i.e. 37% and in the group who are educated till 2-3rd standard(45 in number). House wives being 30 in number were at highest risk and only one women was pregnant.

Conclusion

HIV prevalence of 0.26% among the patients attending RMCH&RC, puts light on the burden on HIV in this part of the country and suggests the need for the scaling up of focused prevention efforts in high-risk groups.

KEY WORDS-HIV, ICTC, seroprevalence.

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INTRODUCTION

The epidemic of HIV and AIDS in developed countries has changed from the early epidemic, which affected primarily men who have sex with men, to the current one, which increasingly affects other groups such as injecting drug users (IDUs) and heterosexuals. As a result of this shift, the number and percentage of women with HIV and AIDS is increasing. In addition, HIV infections in women have the potential for transmission to their infants. Although HIV/AIDS affects both men and women, women are more vulnerable for biological, epidemiologic and social reasons. The broader situations and social conditions that fuel the HIV epidemic, such as marginalization, poverty and particularly gender power inequalities, increase women's vulnerability to HIV infection.

Also, the 95-95-95 strategy is that 95% of reproductive-age women have their needs of HIV and sexual and reproductive health services met, with 95% of pregnant and breastfeeding women living with HIV having suppressed viral loads and 95% of HIV-exposed children tested by 2025 [1,3]. Global health sector strategies (GHSS) on HIV, viral hepatitis, and sexually transmitted infections for the period 2022-2030 guide to generate, analyse, and use evidence and data, with disaggregation by sex, age, and other relevant population characteristics. Taking into consideration the epidemiological, technological, and contextual shifts of previous years, this knowledge should be fostered across the disease areas, in a disease-country-specific manner and to leverage innovations and actions for ending the HIV epidemic [4]. The HIV statistics show that the Southeast Asian region has a decreasing trend in the number of HIV infection rate, HIV-related deaths at all ages, and an increasing trend of patients receiving antiretroviral therapy from 2010 to 2023 [5]. The HIV epidemic in Uttar Pradesh is pooled from other high-prevalence states of India, that are connected by highways, halt points of truck drivers with centres of commercial sexual services, and industrial belts that foster the migration of laborers from different states. Our hospital caters to a large number of antenatal out-state migratory populations, as Kanpur district is the industrial hub of Uttar Pradesh in India [6]

Because HIV infection is incurable, effective HIV prevention, diagnosis, treatment, and care, including for opportunistic infections, enables people living with HIV to lead long and healthy lives. Timely diagnosis and treatment are crucial to decrease HIV transmission in the community and decrease the morbidity of these patients. To increase the outreach of the diagnosis, the high-risk and vulnerable populations require enhanced testing. The effective “triple elimination initiative” recommended by WHO includes: testing for HIV in antenatal care clinics, prompt interventions to treat positive tested women to prevent transmission of the infection to their children, counseling for women and their partners to adopt practices to reduce transmission risk and ensure necessary treatment, safe institutional delivery, proper follow-up of exposed infants, optimal infant feeding practices, and lifelong treatment for mothers living with HIV [7]

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MATERIAL & METHODS

Study design-A retrospective observational analysis of 5 year data, from November2019 to November 2024, was conducted in the Department of Microbiology at the Rama Medical College and Hospital, Kanpur, Uttar Pradesh.

Sample size- The total sample size was 18,250 patients.

Inclusion criteria- All womens attending out patient in these 5 years were included in the study. All the patients were counseled and informed consent was taken from them by ICTC counselors. The data pertaining to the patients included name, age, occupation, education.

RESULT

Out of the total 18,250 womens tested for HIV infection, 48 (0.26%) were found to be HIV seropositive. Maximum HIV seropositivity was in the age group of 31-50 years i.e. 37% and in the group who are educated till 2-3rd standard(45 in number). House wives being 30 in number were at highest risk and only one women was pregnant.

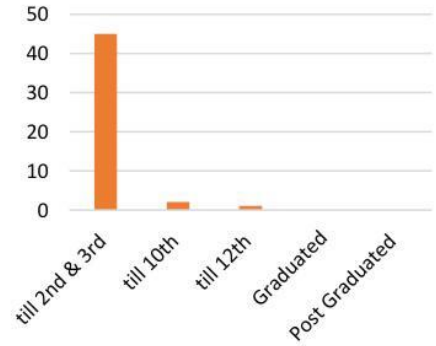

Fig.1 Qualification /Education

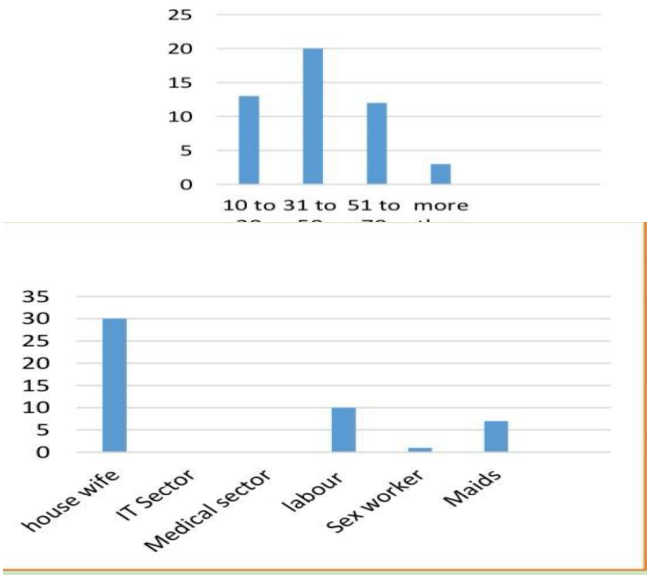

Fig.3 risk/ occupation

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DISCUSSION

This retrospective study represents that the overall HIV seroprevalence among antenatal women for past 5 years was 0.26% and total HIV testing in last 5 years by opt out approach was 90.02% and for last 3 years it is almost 100%. In opt out approach, women are told that an HIV test will be included in the standard group of tests and they may decline the test. Center for disease control (CDC) also recommends opt out approach as the testing rate is 85-98%.[8] According to the studies done by Parameshwari et al, Joshi et al, Sinha et al, Chaudhari et al and Dash et al; the acceptance of HIV testing by opt out approach was 100%, 83%, 79%,96% and 84% respectively.7,12-15 This emphasizes that by good HIV counselling acceptance rate can increase up to 100% as occurs in last 3 years of present study. Maximum HIV seropositivity was in the age group of 31-50 years i.e. 37% and in the group who are educated till 2-3rd standard(45 in number). House wives being 30 in number were at highest risk and only one women was pregnant.

According to present study majority of the women were multigravida and studied up to primary or secondary in contrast to study done by Dash et al and Patil et al where most of the women were primigravida and was either illiterate or studied up to primarylevel.[9] In this study, multigravida were found to be more infected as they were more exposed to infection. Whereas Perry et al state that there is no significant difference between seropositive and seronegative women regarding socioeconomic status, residence and religion.18 In this study, reason for high seropositivity in low socioeconomic status and rural areas may be due to lower level of education, inadequate personal hygiene, poor access to health care facilities, high prevalence of STD and sexual promiscuity among them. In present study husbands of 26 (55.9%) females were found positive and 21(43.6%) were negative for HIV infection. Major cause of discordant couple was sexual promiscuity (73.3%) in females. Hence main route of transmission of infection was heterosexual contact. The age wise distribution showed a higher predisposition of infection in middle age group being maximum in age group of 31-50 (37%) followed by 10-30 years (25.4%) and least in age group >71 years (0.49%). This can be explained by the fact that the total number of women tested in these age groups were less as compared to women screened in age ranging between 20-50 years. Present study is hospital based survey for past 5 years while NACO uses sentinel surveillance system .However, the seroprevalence in our study is less than the national data. but as Uttar Pradesh comes under low prevalence region [10]and prevalence of 0.26 % against 0.21% for the state, rings a bell because Uttar Pradesh occupies 16% of total population of India .Hence it is high time for strengthening & implementation of PPTCT and intervention programs such as HIV awareness & safe sex education in each and every corner of the state.

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