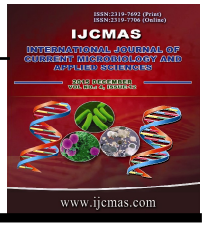
Int.J.Curr.Microbiol.App.Sci (2015) 4(12): 358-362

International Journal of Current Microbiology and Applied Sciences
ISSN: 2319-7706 **Volume 4 Number 12 (2015) pp. 358-362**
http://www.ijcmas.com



Original Research Article

Seroprevalance of HIV, HBV, HCV and Syphilis among High Risk Group and General Population at Kims, Amalapuram, India

N. Padmaja* and P.Nageswara

KIMS Medical College, Amalapuram, India
**Corresponding author*

Keywords

HIV,
HBV,
HCV,
Syphilis,
High Risk Group,
Sexually Transmitted Diseases

A B S T R A C T

Sexually transmitted diseases are a group of must common communicable diseases that have gained importance in all societies, all over the world in recent years. They cause loss of years of health & productive life. There diseases are caused by wide range of Bacterial, Viral, Protozoa & Fungal agents, which include emerging & re-emerging infectious agents. There causative organisms are after delicate and do not remain viable for long out side the body. Survival of there organisms depend on transmission by direct contact hetman mucosal surfaces. The parent study is undertaken to known the seroprevalence of HIV, HBV, HCV & Syphilis among high risk groups & general population attending STD clinic and Obstetrics & Gynecology department at KIMS, Amalapuram. A total of 250 STD patients with suspected sexually transmitted disease from Amalapuram & surrounding areas formed study group & 250 antenatal women attending antenatal clinics for checkup, considered as representative of general population, are taken as control group & were screened for HIV, HBV, HCV & Syphilis out of 250 samples of study group, 10 (28.6%) were reactive for HIV, 26 (10.4%) Positive for HBsAg antibodies, 10 were positive for HCV & 30 (12.6%) were reactive for Syphilis. Out of 250control samples, 5 (2%) were reactive for HIV, 24 (9.6%) Positive for HBV, 2 (0.8%) positive for Syphilis. In the study group HIV (28.4%) infectious are more in females where as HBV (15.6%) and Syphilis infectious (6.4%) are more common in Males. The most common age group affected was 20 – 29 yrs in both groups. Association of other STD`s with HIV was 28 % in study group and 3.2 % in control group.

Introduction

STD`s are a group of most common communicable diseases that have gained importance in all societies all over the world in the recent years. They cause loss of years of health and productive life. These diseases are caused by wide range of Bacterial, Viral, Protozoan and Fungal agents, which include emerging and reemerging infectious agents.

These causative organisms are often delicate and do not remain viable for long outside the body. Survival of those organisms depends on transmission by direct contact between mucosal surfaces (1,2).

In recent years a variety of newer infectious agents have been added and the list have

expended from the 5 venereal diseases producing pathogens to more than 20 agents. The most recently recognized HIV / AIDS continues its devastating path through all the contaminants and will weak havoc for many years to come especially in the III rd world war (3, 4). Emergence of AIDS as a pandemic effecting 193 countries has threatened the economic, developmental, Social welfare and public health programs all over the world. The global burden of HIV infection is presently borne over whelmigly by people in the developing countries. There is still hope that threat of HIV / AIDS pandemic can be confronted and over come with sincere efforts (5).

Symptomatic patients of both sexes attenuating STD clinic representative of high risk group and group representing general population without any diseases, yet attending hospitals is preferred (6,7). Hence antenatal women representative of general population were selected for the presented study.

Studies regarding HIV, HBV and HCV are spans in this region and the present work may provide basic data and results may widen the scope for further studies in this field.

Materials and Methods

The present study was conducted in the Dept. of Microbiology, KIMS & RF, Amalapuram as per the guidelines of National AIDS control organization during VI round of sentinel surveillance, from April to August 2015. (5 Months).

250 STD patients with suspected sexually transmitted diseases from Amalapuram and surrounding places formed the study group. 250 Antenatal women attending antenatal clinics for checkup who can be considered as representative of general population were also included in the present study. All the 500 samples were screened for serological markers of HIV, HBV, HCV and Syphilis.

A detailed history regarding behavior occupation, migration, literacy and medical history were taken from all participants. The signs and symptoms of patients were also taken in to account and data analyzed. Blood samples were collected and processed for the presence of various serological markers indicated of STD`s like, HIV antibodies, HCV antibodies, Hepatitis B Surface Antigen, Reagin antibodies.

Results and Discussion

Sex wise analysis of the study group shows that male to female ratio almost equal, where as the subjects of control group are all females. (Table No:1)

When the overall prevalence of STD`s in study & control groups are compared, it is observed that Syphilis infection is 15 times, HIV & HCV infections are 9 – 10 times more in the study group than that of control group, where as HBV infection is almost equal in both groups (Table No: 2).

The rout of transmission of there infection is by sexual contact & it is a well known fact that prevalence of STD`s is higher in study group compared to control group, which was confirmed in the present study. The factors rap. For equal prevalence of HBV infection in both groups is not well understood through route of transmission is same as that of other infection.

Most of the female attendance of STD clinics are CSW with the habit of taking precautionary medicines this may be the reason for lamer prevalence of other STD`s in females inspite of then equal attendance to clinics.

Table.1 Seroprevalence of STD`s among Study and Control Groups

Groups Studied	No. of Samples	HIV + ve	HBsAg + ve	HCV + ve	RPR + ve
Control group	250	5 (2%)	24 (9.6%)	0	2 (0.8%)
STD patients	250	70 (28.6%)	26 (10.4%)	10 (4%)	30 (12.6%)

Table.2 Sex Wise Distribution of STD`s among Study Group

Groups Studied	No. of Samples	HIV + ve	HBsAg + ve	HCV + ve	RPR + ve
STD Males	120	33 (27.5%)	18 (15.6%)	5 (4.16%)	16 (6.4%)
STD Females	130	37 (28.4%)	8 (6.15%)	2 (1.6%)	14 (5.7%)
Total cases	250	70 (28%)	26 (10.4%)	7 (2.8%)	30 (12%)

Table.3 Age Wise Distribution of STD`s Studied

Age group	Study group		Control Group	
	No. Tested	No. of Positives	No. Tested	No. of Positives
Below 20 yrs	19 (7.6%)	2 (10.8%)	74 (29.6%)	6 (2.4%)
20 – 29 yrs	126 (50.4%)	70 (28%)	170 (68.6%)	24 (9.6%)
30 – 44 yrs	94 (37.6%)	55 (22.6%)	4 (1.6%)	1 (0.4%)
45 & above	11 (4.4%)	6 (2.4%)	2 (0.8%)	-
Total	250	133	250	31

Table.4 Associated with Various Symptoms

Symptom	No. Tested	HIV	HBsAg	HCV	RPR
Genital Ulcer	90 (36.1%)	30 (12%)	14 (5.6%)	-	15 (6%)
Urethral / Cervical discharge	150 (60.6%)	35 (14%)	15 (6%)	2 (0.8%)	12 (4.8%)
Genital ulcer & discharge	3 (1.2%)	1 (0.4%)	-	-	-
Inguinal bubo	4 (1.6%)	2 (0.8%)	-	-	-

Table.5 Association of other STD`s with HIV in Study Control Group

STD studies	No. of Positives		Association with HIV	
	Study group	Control group	Study group	Control group
HIV	70(28.1%)	5 (2.6%)	70 (28%)	8 (3.2%)
HBsAg	26 (10.4%)	20 (8%)	10 (4%)	1 (0.4%)
HCV	7 (2.8%)	-	2 (0.8%)	-
RPR	30 (12%)	2 (0.8%)	10 (4%)	-

While analyzing the disease wise distribution of STD`s in males, HIV is found to be highest, followed by Syphilis, HBV and HCV.

Most common group showing highest prevalence of STD`s is 20 – 29 yrs (28%) which is sexually active age groups (Table No.3).

The seroprevalence of HIV infection among study & control groups shows that it constitutes 28% of all STD`s in study group & 2% in control group. Regarding HBV infection, the prevalence is high in both study & control group which may be due to routes, other than sexual contact.

HCV prevalence is low among all STD`s 2.8% in study group & 0% in control group.

Prevalence of HIV & HBV is high in patients. Presenting with genital ulcer, Urethral / Cervical discharge. The must common to infection with HIV is Syphilis, followed by HBV & HCV (8,9).

The strong association of other STD`s to HIV sero positivity has substantiated the view that HIV infection walk side by side with other STD`s due to similar route of transmission & risk factors (10). In addition to confirming the high prevalence of HIV infection in this region, the present study emphasizes the emergence of how ewer STD`s namely HBV, HCV infection in general population & alarms the community, gout to fake immediate necessary steps to stop the spread of there in general population.

In the present study 250 sera collected from patients of both sexes attending STD clinic formed the study group and 250 sera from antenatal women attending clinic who can be considered as representatives of general population formed the control group were screened for serological markers of some sexually transmitted diseases namely HIV, Hepatitis B, Hepatitis C and Syphilis.

Out of 250 cases of study group, 60 % of sera were positive for serological markers of various STD`s studies. Where as in control group percentage positivity is 19, indicating rapid spread of these infections in to community which is very less compared to the high risk group that is study.

More than 50% of all cases studied belong to 20 – 29Yrs age group. Highest percentage positivity of all STD`s studied is observed between the ages of 20 and 44 yrs which is sexually action age group.

Reference

1. Archana Prakash, Deepa Sharma, Shrma V.S. Singh. Predictive role of Sexually Transmitted Diseases for the incidence of HIV positivity, Meerut, U.P. (Indian Medical Gazette – March – 2001).

2. A.G Dhana Vijaya, Nagpur – HIV infection & Syphilis (Indian J sex transmission Dis 2000: 21 No. 1:8 – 12).
3. Combe P, La Ruche G, Bonard D, Ouassa T, Faye – Kette H – Hepatitis B & C infections, HIV & other STIs among women of Child hearing age in cote d Ivore, West Africa (Trans R Soc Trop Med Hyg 2001, Sep – Oct 95 (5): 493 – 6).
4. Colour Atlas & Text book of Diagnostic Microbiology, 5th edition, Elmer W Koneman, Stephan D Allew, William m Janda, Paul C Schrecken berger, Washington C, Winn jr, Lippincoot, Philadelphia, New York.
5. NACO, National AIDS Control Programme:India, Country Scenarria, an updarte, Dec, 1996, NACO, Ministry of Health & family Welfare, Goot of India, Page – 29.
6. Ndumber PM, S Kalsky J, Joller – Jemelka HI – Seroprevalence of Hepatitis & HIV infection among rural pregnant women in Cameroon (APMIS, 1994, Sep; 102 (9) ; 662 – 6).
7. S.M. Mehendale, Mary E Shepherd, A.D Divekar, R.r GangaKhedkar, R.C. Bollinger – Evidence of high prevalence & rapid transmission of HIV among individuals attending STD clinics in Pune, India (IJMR 104, Dec, 1996, pP327 – 335).
8. Virendra Singh, Bhushan Kumar, Deepak Kumar bhasin & Satish Kumar Mehata, Prevalence of hepatitis B Virus Infetia in patients with STD`s in North India (Indian J sex Transmission Diseases 1994 ; 15 ; 13 – 14).
9. SmiKle M, Dowe G, Hylton – Kony T, Williams E – Hepatitis B 7 C Viruses and sexually transmitted disease patients in Jamaica (Sexually Transmission infect 2001 Aug ; 77 (4) ; 295 – 6).
10. S.K Shahi, Sunil Ranga, Ritu mahahan – Hepatitis V infection & Recent Diagnostics Modalities (Indian J.Pathol. Microbiol. 43 (2) ; 103 – 104, 2000).