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Original Research Article

HIV awareness among first year MBBS students in a private medical college, Telangana, India

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ABSTRACT

Background: Globally, since 1980, 70 million people were infected with HIV virus and 33.3 million people have died of HIV. In Sub-Saharan Africa, largest number of people living with HIV is Asia. In these areas 19 million of the 35 million people living with the virus globally do not know their HIV positive status. The objectives of the study were to know the awareness regarding HIV and its mode of transmission, clinical features and diagnosis of HIV, prevention and vaccine availability of HIV.
Methods: Study design: cross sectional study, study area: private medical college, Telangana state, study population-136 students in the 1st year MBBS. Methodology: The data was collected by a pre designed, pretested and semi structured questionnaire which consisted of, identification data, HIV Awareness, mode of transmission, symptoms and diagnosis, prevention and vaccine availability of HIV. The data was analyzed by using Microsoft Excel.
Results: Males and females in the study were 43.38% and 56.6% respectively. Mean age of students was 18.184. 100% of the students heard about HIV, 25% of the students did not know that HIV and AIDS are different stages of the same disease. 98.52% were aware that contaminated needles and syringes as route of transmission, 87.5% were aware about vertical transmission. 93.38% of the students have a correct opinion that avoiding multiple partners'. 80.88% knew that antiretroviral drugs are available. 91.91% knew that the vaccine is not yet available for HIV.
Conclusions: There is overall satisfactory level of awareness on routes of transmission and prevention of HIV/AIDS but knowledge regarding symptoms is less. There were several misconceptions regarding route and Prevention of HIV. Very few knew that immediate medical attention will prevent HIV.

Keywords: HIV, Mode of transmission, Clinical symptoms, Prevention

INTRODUCTION

AIDS (acquired Immune deficiency syndrome is a fatal illness caused by retrovirus (HIV Virus), which breaks down the Immune system, leaving the victim vulnerable to life threatening infections.

HIV infection once infected, the person will be infected for life and AIDS refers to last stage of HIV Infection. AIDS has evolved as Modern pandemic affecting all the countries.

Globally, since the beginning of the epidemic in 1980, more than 70 million people have been infected with HIV virus and 33.3 million people have died of HIV. Now, by the end of the year 2015, globally, 36.7 million [34.0–39.8 million] people were living with HIV. An estimated 0.8% [0.7-0.9%] of adults aged 15–49 years worldwide was living with HIV, although the burden of the epidemic

continues to vary considerably between countries and regions.[1]

After Sub-Saharan Africa, the region with the largest number of people living with HIV is Asia. In these areas 19 million of the 35 million people living with the virus globally do not know their HIV—positive status. [2]

Six countries- China, India, Indonesia, Myanmar, Thailand, and Vietnam - account for more than 90 per cent of the people living with HIV in the region.

In India, National adult (15-49 years) HIV Prevalence is estimated as 0.26% (0.22%-0.32%) in 2015 which is 0.30% among males and 0.22% among females.

Andhra Pradesh and Telangana (prevalence 0.66%) are in 4th position in the burden of HIV in India after Manipur (1.15%), Mizoram (0.80%), Nagaland (0.78%).

The total number of people living with HIV (PLHIV) in India is estimated as 21.17 lakhs in 2015. If we see the number affected with HIV Undivided Andhra Pradesh and Telangana have the highest estimated no of people living with HIV/AIDS with 3.95 lakhs population, followed by Maharashtra, Karnataka, Gujarat, Bihar and Uttar Pradesh and the main reason for such a high burden is due to lack of awareness.[3,4]

The age group most vulnerable for HIV Infections is 15-24 years of age and MBBS students come under this age group.[5]

World Health Organization has also stressed the importance of including training in sensitivity, communication skills, and the development of compassionate attitudes toward HIV infected patients in the medical curriculum.[6]

As MBBS students are future doctors and they have to take care and treat HIV patients and have to teach various health personals and general population, they should be having correct knowledge without any misconceptions so that they will impart the same knowledge to the people and treat the patients with decreased fear and increased empathy, and also the key strategy for controlling this epidemic is health education, particularly Information, Education and Communication (IEC)/behavior change communication (BCC).

Many studies concerning HIV related knowledge and attitudes conducted amongst both health professional and medical students reported that early educational intervention has the potential to bridge the gap both in knowledge and the negative attitudes directed towards those with HIV infection.[7,8]

Hence, the present study was conducted to assess awareness regarding HIV/AIDS among first year medical students of a medical college in Telangana.

Objectives

1. To know the awareness regarding HIV and its mode of transmission.
2. To know the awareness regarding clinical features and diagnosis of HIV.
3. To know the awareness regarding prevention and Vaccine availability of HIV.

METHODS

Study design

Cross sectional study.

Study place

1st year MBBS students of Maheshwara medical college, Patancheru, Medak district. Private medical college, Telangana state.

Study population

136 students in the 1st year MBBS, who were present on the day of data collection and enrolled for the participation in awareness study were included in the study.

Study period

December 2016 to April 2017.

Sampling method

The sampling method used was universal sampling method. All the 1st year MBBS Students who were present on the day of data collection and agreed to participate in the awareness study were included.

Ethical clearance

The study was conducted after obtaining ethical clearance from the Institutional Ethics Committee, Maheshwara Medical College.

Methodology

First all the 1st year MBBS students were gathered in a class room then all the students were explained about the purpose of the study and the procedure of conduction of the study, after explaining the purpose of the study, consent was taken by taking the signature on the consent form. All the students present on the day have given consent for participation that is 136 students.

Then the data was collected by distributing a pre designed, pretested and semi structured questionnaire which consisted of three parts, the first part having questions on identification data and HIV awareness. The second part on mode of transmission, symptoms and

diagnosis of HIV and the third part on prevention and vaccine availability of HIV, myths regarding mode of transmission and prevention of HIV and source of information. Forty five minutes time was given to answer all the questions and during this time, the entire faculty were available to clear the doubt regarding any question. Answered sheets were collected after 45 minutes.

After the answer sheets were collected, each question was discussed and correct answers were explained to the students using Power point.

The answers were entered in Microsoft excel using coding system and analyzed using percentages and proportions.

The results were tabulated and presented by percentages.

RESULTS

A total of 136 students participated in the study from 1st year MBBS, among them Males were 59 (43.38%) and Females were 77 (56.6%). Mean age of students was 18.184 ± 0.781 years. 27 (19.85%) students were between 17-18 yrs. and the majority remaining 109 (80.14%) were between 18-20 yrs.

As shown in Table 1, all most all the students heard about HIV, its causation but 25% of the students did not know that HIV and AIDS are different stages of the same disease.

Table 1: Awareness about HIV.

Knowledge about	Aware (%)	Not Aware (%)
Heard about HIV	136 (100)	0
HIV Caused by Virus	135 (99.26)	1 (0.7)
Full Form of HIV	135 (99.26)	1 (0.7)
Full Form of AIDS	136 (100)	0
Difference between HIV and AIDS	102 (75%)	34 (25)
Total	136 (100)	136 (100)

Table 2, in assessment of knowledge regarding mode of transmission of HIV, all most all the students were aware that contaminated needles and syringes (98.52%) and blood transfusion (99.26%) are the routes of transmission, majority were aware that indiscriminate sexual relationship (91.9%) and un protected sex (94.85) as route of transmission and only 87.5% were aware about vertical transmission. Only 27.2% were aware that oral sex as the route of transmission. 80.8% were aware that tattooing with contaminated needles transmits the disease.

In Table 3, knowledge regarding risk factors and risk groups is very poor, only 8.08% were aware that commercial sex workers are risk groups and only 2.2% of the medical students were aware that drug abusers are risk group.

Table 2: Knowledge about modes of transmission.

Knowledge about modes of transmission through	Present	Absent
Needles and syringes	134 (98.52)	2 (0.14)
Blood transfusion	135 (99.26)	1 (0.7)
Mother to Fetus	119 (87.5)	17 (12.5)
Indiscriminate Sexual relations	125 (91.9)	11 (8.08)
Unprotected sex	129 (94.85)	7 (5.1)
Oral sex	37 (27.2)	99 (72.7)
Tattooing with contaminated Needle	110 (80.8)	26 (19.1)
Infected blade	84 (61.7)	52 (38.2)
Awareness regarding, not all HIV mothers give birth to HIV Babies.	67 (49.6)	61 (44.8)

Table 3: Knowledge about risk groups and risk factor of HIV.

Risk groups	Present	Absent	Total
Commercial sex workers	11 (8.08)	125 (91.9)	136 (100)
Drug abusers	3 (2.2)	133 (97.8)	136 (100)

Table 4: Misconceptions regarding HIV transmission.

Route of transmission	Correct awareness	In correct awareness
Can healthy Person transmit HIV?	86 (63.2)	50 (36.76)
Coughing and sneezing	121 (88.9)	15 (11.03)
Hugging and kissing	127 (93.3)	9 (6.61)
Using same utensils	128 (94.11)	8 (5.88)
Sharing same towels/Clothes	132 (97)	4 (2.94)
Sharing Toilet seats	124 (91.1)	12 (8.82)
Hair cut	120 (88.23)	16 (11.76)
Mosquito bite	116 (85.29)	20 (14.70)
Staying together	130 (95.58)	6 (4.4)
Sex during menstrual period	74 (54.41)	62 (45.58)
Sharing the same swimming pool	125 (91.91)	11 (8.08)

As shown in Table 4, only 63.2% of students were aware that healthy person can transmit HIV. Few percentage (11.03%) of students still feel that coughing and sneezing (11.03%), hugging and kissing (6.61%), sharing utensils (5.88%), towels and clothes (2.94%), toilet seats (8.82%), hair cut (11.76%), mosquito bite (14.7%), staying together (4.42%) sharing swimming pool (8.08%) as the route of transmission of HIV.

Almost half of the MBBS Students have wrong opinion that Sex during menstrual period (45.58%) can transmit HIV.

As seen in Table 5, Only 8.08% of the students knew at least one correct symptom of HIV, 33.83% of the students were aware that there will be 3 months of window period after acquiring infection, only 13.23% were aware about maintenance of confidentiality of HIV infected person and only 25.73% were about availability of ICTC center in the nearby area.

Table 5: Knowledge regarding symptoms and diagnosis of HIV.

Knowledge	Correct	Absent	Total
Correct symptoms	11 (8.08)	125 (91.91)	136
Window period (after how many days of exposure can HIV positive person show confirmatory laboratory test)	46 (33.83)	90 (66.17)	136
Knowledge regarding maintenance of confidentiality in HIV testing	189 (13.23)	118 (86.76)	136
Knowledge regarding ICTC center availability.	35 (25.73)	101 (74.2)	136

Table 6: Knowledge about prevention and vaccines regarding HIV.

Prevention of HIV by	Awareness present	Awareness not present
Is HIV/AIDS preventable	129 (94.85)	7 (5.14)
Usage of condoms	136 (100)	0 (0)
Safe blood/products transfusion	122 (89.70)	14 (10.29)
Avoiding multiple partners	127 (93.38)	9 (6.67)
Mutual faithfulness	90 (66.17)	46 (33.82)
Avoiding contact with saliva, tears, sweat or urine of HIV patient	85 (62.5)	51 (37.5)
Seeking immediate medical attention after exposure	40 (29.41)	96 (70.58)
Killing power of HIV with bleach	9 (6.61)	127 (93.38)
Non availability of vaccine	125 (91.91)	11 (8.08)
Availability of antiretroviral drugs	110 (80.88)	26 (19.11)

Table 7: Myths regarding prevention of HIV.

MYTHS	Correct	Incorrect
Use of I PILL can prevent HIV	87 (63.97)	49 (36.03)
Undergoing vasectomy and tubectomy can prevent HIV	95 (69.85)	41 (30.14)
Not sharing food with people living with HIV/AIDS	100 (73.52)	36 (26.4)

Table 8: Source of information.

Source	No (%)
Television	60 (44.12)
Internet	72 (54.55)
Teacher	73 (53.68)
News Paper	38 (27.95)
Friends	53 (38.98)
Family	15 (11.03)
Health Professional	16 (11.77)
Books	93 (68.39)

As shown in Table 6, 94.85% of the students have correct opinion that HIV is Preventable. All the students knew that use of condoms will prevent HIV transmission, 93.38% of the students have a correct opinion that avoiding multiple partners and having single faithful partner will prevent HIV, However only 29.41% knew that immediate medical attention prevents HIV although 80.88% knew that antiretroviral drugs are available. Majority (91.91%) knew that the vaccine is not yet available for HIV.

As shown in Table 7, there are certain myths/Incorrect opinions regarding Prevention of HIV, as 36.029% believe that I PILL can prevent HIV, 30.14% feel undergoing vasectomy and tubectomy can prevent HIV

and 26.4% believe not sharing food with people living with HIV can prevent HIV/AIDS.

As shown in Table 8, Majority of the students (68.39%) got the information regarding HIV by browsing Books, 53.68% of the students got information from the teachers, next browsing to Internet (54.55%), next leading source of Information being Television (44.12%) and next friends (39%).

DISCUSSION

HIV infection is most important social issues and rapidly spreading disease of the twenty first century but still awareness of disease among people is still low. The current study assessed the awareness level of HIV, its mode of transmission, symptoms and prevention of HIV among 1st year MBBS Students. Awareness regarding HIV is essential to students as they are future doctors and have to advise their patients and also protect themselves regarding taking rational decisions about their sexual life and can protect against HIV infection.

In our study, all most all the students heard about HIV (100%), its causation (100%), which is quiet good compared to the study conducted by Kiran et al among paramedical students in Belgaum, which is 58.5% in male students and 40.9% in female students.[9]

In our study, 25% of the students did not know that HIV and AIDS are different stages of the same disease.

In the present study, 98.52% of the students were aware that contaminated needles and syringes as mode of transmission, blood transfusion (99.26%) as the routes of transmission, indiscriminate sexual relationship (91.9%) and un protected sex (94.85) as route of transmission and only 87.5% were aware about vertical transmission our results are similar to the Kiran et al study in whom, 94.12% were aware regarding contaminated needles and syringes, 95.09% on blood transfusion, 100% were aware regarding unprotected sex, 84.31% were aware about vertical transmission.[9]

In our study, only 27.2% were aware that oral sex as the route of transmission and 80.8% knew that, tattooing with contaminated needles transmits the disease similar to study conducted in Belgaum (85.92%).[9]

There were some misconceptions regarding the spread of disease that is, 63.2% of students were aware that healthy person can transmit HIV which is better than Anjali et al study where only 44.1% were aware.[10]

Other misconception found in the study were, hugging and kissing (6.61%), sharing utensils (5.88%), towels and clothes (2.94%), toilet seats (8.82%), hair cut (11.76%), mosquito bite (14.70), staying together (4.42%) sharing swimming pool (8.08%) as the route of transmission of HIV, similar results were found in Satheesh et al study in Kerala, where misconceptions found among medical students were hugging & kissing (7.4%), sharing of utensils 4.4%, sharing of towels 5.9%, sharing of urine 17.8%, Hair cut 8.9%,mosquito bite 15.6%.[11] Chatterjee et al found school children with similar misconceptions.[12] Kissing as a mode of transmission was a major misconception (37%) in a Nigerian study among Nigerian non-medical students.[13]

Kiran et al in his study in Belgaum also found similar conceptions in the study, that is sharing food (2.4%), sharing utensils (7.3%), mosquito/insect bite (19.5%), kissing (12.1%).[9]

Almost half of the MBBS Students have wrong opinion that sex during menstrual period (45.58%) can transmit HIV.

In our study only 25.73% were aware about availability of ICTC centre in the district, awareness is quiet low compared to Kiran et al study, where 77.45% were aware.[9]

In the present study, 94.85% of the students have correct opinion that HIV is preventable, awareness is quiet high compared to Anjali et al study where only 63.6% were aware and Kiran et al where 67.64% were aware.[9,10]

All the students knew that use of condoms will prevent HIV transmission, compared to only 84.4% awareness in Satheesh et al study.[11]

93.38% of the students were aware that avoiding multiple partners and having single faithful partner will prevent HIV; awareness is quiet better compared to Satheesh et al study (75.6%).[11]

In our study, only 29.41% knew that immediate medical attention prevents HIV, awareness is quiet low compared to study conducted among Nigerian family physicians (97.7%).[14]

Majority (91.91%) knew that the vaccine is not yet available for HIV; awareness is quiet better compared to study conducted by Mohan et al (18.75%).[15]

In the present study, Majority (68.39%) got the knowledge by print media, Next (53.68%) from the teachers, Internet (54.55%), Television (44.12%) and friends (39%). Similar findings were noted by Kiran et al.[9]

CONCLUSION

Our study says that there is overall satisfactory level of awareness on routes of transmission and prevention of HIV/AIDS but knowledge regarding symptoms is less. There were several misconceptions regarding route and Prevention of HIV. Very few knew that immediate medical attention will prevent HIV. The results

emphasize that there is a need of education programmes in the school and adolescent period in the country so that risk groups will be properly informed about this disease and they would act accordingly. The study also suggests need of sex-education or adolescent education in schools to facilitate the adolescents with correct scientific knowledge on sexuality and puberty related concerns. Inclusion of specific chapters on HIV/AIDS will also help in preventing the spread of this pandemic to a large extent.

Limitations

We cannot apply the results to the total population as it is not community based study.

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