HIV Infection among women has rapidly risen in the past few years causing concern to health care regulators.
HIV/AIDS TRANSMISSION RISK PERCEPTIONS IN PREGNANT WOMEN IN A HOSPITAL SETTING

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Abstract:
HIV Infection among women has rapidly risen in the past few years causing concern to health care regulators. A sample survey was conducted among pregnant ladies attending the out patient facilities in a service hospital, to ascertain their knowledge and perceptions about the disease – HIV/AIDS.

While a majority was aware of the risk factors for transmission of HIV, a majority were still ignorant about the role of breast-feeding in transmission of the disease. Few even implicated public toilets and a casual sexual contact in disease transmission.

The knowledge about ‘safe sex’ was inadequate. More than three-fourths of the respondents were unaware of availability of free Anti-Retroviral Therapy (ART).

The data collected when analysed suggested that counseling on safe sexual practices and contraceptives are still very much required in this ‘vulnerable’ group of women in the reproductive age. STI clinics need to be rapidly incorporated in our present health system. Discussion and awareness forums, as well as counseling for those on ART is recommended to be included in any HIV prevention programme.

Keywords: HIV/AIDS, transmission, ART, counseling, safe sex
Introduction:

India is now estimated to have the second largest number of People living with HIV/AIDS (PLHAs) in the world (1). This disease was first detected among male homosexuals in the USA, but over the past 3 decades has come to be prevalent almost equally among males and female (2). Almost half among those affected are not aware about their positive status, proving that the “iceberg” phenomenon of disease exists thus being a very important area of public health concern. Another cause of concern is the fact that more than 80% of those affected with the virus are in the reproductive age group (15-49 years). Among women, 9 out of 10 of those affected belong to a developing country like ours and needless to say, more than four-fifth of them get infected by their male partners (3). Soldiers generally have 2-5 times higher prevalence rates as compared to the civilian population, a fact well-documented and proven, due to the migratory and stressful nature of their jobs (4). This automatically puts the spouses at risk. Sexual relationships of their husbands with commercial sex-workers or an occasional homosexual contact, due to lengthy periods of stay away from home, are the primary reasons (5). Infected women in turn are the major source of infection for infants and young children, with the rate of vertical transmission of the HIV from mother to fetus varying from 15-48% (6). Trends in HIV infection among women forecast the impact of HIV in children. Those figures too have been rising despite introduction of Anti-retroviral Therapy (ART) to check peri-natal transmission (7).

On the brighter side however, there is much better awareness of the virus presently, than almost 27 years ago when the first case was reported in India amongst 6 commercial female sex workers in Chennai. There are comprehensive National and many other AIDS Prevention programmes in place; and States as well as the National AIDS Control societies helping to increase awareness levels, bringing about behavioral changes, distributing condoms, empowering women and ensuring free ART to those needing it.

The Armed Forces too has a series of health programmes to tackle the menace of HIV/AIDS and Sexually Transmitted Infections (STIs), which have shown positive results over the years (8). It is certainly important that we constantly monitor the levels of knowledge on HIV/AIDS in the “vulnerable” population i.e. the young, the children and our women, to assess the impact of various prevention programmes and modify them accordingly, as on required basis.

Material & Methods:

A survey was carried out in an Ante-natal OPD over a period of 4 months in a service hospital. The study targeted wives of soldiers reporting for Ante-natal booking/screening. A pre-tested proforma was administered to those willing, after informed consent was obtained in a separate form in each case. Just ‘Yes’ or ‘No’ or ‘don’t know’ answers was expected from the respondents. Individuals leaving an answer blank were considered to be not aware of the right answer.

Information on causative agent(s), mode(s) of transmission, sexual practices and treatment facilities available was collected. These included open-ended questions on awareness, spread, prevention and control measures of the disease.

The women answered the questionnaire in the presence of one of the investigators, and any clarification needed was provided to them, without any chance of bias. Importantly and essentially, the confidentiality of the women was maintained, as nowhere in the questionnaire was she needed to mention her name, address, spouse’s name or any such
personal information. The data collected was assessed and analysed statistically, on completion of the duration of the study.

All women enrolled in the present study were offered pre- and post-test counseling as well as mandatory ante-natal screening for the HIV and other STIs. An attempt was made to link the assessment of knowledge on HIV/AIDS and attitudes to provide diverse methods of sexual health promotion among troops and families living in the nearby areas. Results:

Though 194 women attended the Ante-natal clinics during the 4-month period of the present study, only 180 women willingly answered the questions in the proforma, while the rest 14 declined giving their personal reasons. The response was therefore more than satisfactory (92.8%). On an average, each respondent took about 10-12 minutes to answer the questionnaire. Each time a clarification was needed by any of the respondents, one of the investigators was present to help the respondents.

The awareness levels of the modes of disease transmission has been tabulated below. It is evident that most of the women were aware about the risk factors for transmission of HIV/AIDS principally sexual (158, 87.8%) and the blood-borne modes (170, 94.4%). However, the reason for worry is that 20% of the participants were uncertain or didn’t know that casual contact doesn’t spread the disease. This could be a reason for existing stigma and discrimination as regards HIV/AIDS. Similarly, approximately 15% of the participants were either unaware or didn’t know that insects like the mosquito have no role in spread of this deadly virus. Again, 20 (11.1%) of the women surveyed said that using community lavatory has a role in disease transmission proving that a lot of misconceptions still exist in the community about the factors responsible for spread of HIV/AIDS. Blood donors were wrongly considered to be at risk of contacting the infection by approximately 28% of the respondents, which is quite a large number. Ten-percent or 18 of them were not sure whether blood donation had a role in spread of the disease. Table 1 below gives the information.

### Table 1: Awareness levels on different modes of transmission of HIV/AIDS

<table>
<thead>
<tr>
<th>Modes of transmission</th>
<th>Number of respondents who said – (n= 180)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td>Unsafe sexual act</td>
<td>158 (87.8)</td>
</tr>
<tr>
<td>Casual contact</td>
<td>26 (14.4)</td>
</tr>
<tr>
<td>Air, food, water</td>
<td>07(3.9)</td>
</tr>
<tr>
<td>Mosquitoes &amp; bugs</td>
<td>19 (10.5)</td>
</tr>
<tr>
<td>Public Toilets &amp; sinks</td>
<td>11(6.1)</td>
</tr>
<tr>
<td>Blood transfusion recipient</td>
<td>170 (94.4)</td>
</tr>
<tr>
<td>Blood donor</td>
<td>51(28.3)</td>
</tr>
</tbody>
</table>

(Figures in brackets give the percentage)

Since the study particularly focused on pregnant women, the relevant query on transmission of the virus from Mother-to-Child was inquired upon separately and tabulated.
accordingly (Table 2). While 18.9% i.e. 34 of the 180 women were unaware that the HIV could be passed onto the baby during pregnancy, which should again be an area of concern, about a high 69.4% were under the impression that Breast-milk does not spread the virus to the newborn infant or they were unaware of this. This demonstrates that awareness on this key facet is still lacking which should warrant a lot of IEC activities targeting young and adolescent women – the mothers and would-be mothers. However, the large majority were cognizant of the fact that children born to parents with HIV/AIDS are at definite risk of acquiring the infection. While 167 (92.8%) of the respondents knew about this, a small percentage didn’t know or were not aware of this fact also.

**Table 2 : Awareness on Mother-to-Child transmission of the HIV Virus**

<table>
<thead>
<tr>
<th>Modes of transmission from Mother-to-Child</th>
<th>Number of respondents who said – (n = 180)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td>To children born to parents with HIV/AIDS</td>
<td>167(92.8)</td>
</tr>
<tr>
<td>To fetus during pregnancy</td>
<td>146(81.1)</td>
</tr>
<tr>
<td>Through Breast-milk</td>
<td>55 (30.6)</td>
</tr>
</tbody>
</table>

(Figures in brackets give the percentage)

Eighty-eight to Ninety-three percent of the women included in the study participants were aware that hetero-sexual contact with an infected person or a commercial sex worker was the main cause of acquiring the infection. People like the rest in this study who are still not aware, have to be targetted on war-footing and rendered knowledge on causes of HIV/AIDS. That a man having sex with another man -homosexuality- can be a principal cause in acquiring the virus, was unknown to almost 19% and 44% said that this could not cause the disease. This again, shows that while many are aware about the hetero-sexual route, the homo-sexual route is still a ‘not to be talked about’ affair. but over half of them were ignorant of the risks of indulging in unsafe sexual practices. Table 3 summarises this data.

**Table 3 : Sexual practices in causation of HIV/AIDS**

<table>
<thead>
<tr>
<th>Unsafe practices</th>
<th>Number of respondents who said – (n=180)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td>Sex with Infected person (Hetero-sexual act)</td>
<td>167 (92.8)</td>
</tr>
<tr>
<td>Sex with Homosexual contact</td>
<td>69 (38.3)</td>
</tr>
<tr>
<td>Sex with Commercial Sex Worker</td>
<td>158(87.8)</td>
</tr>
</tbody>
</table>

(Figures in brackets give the percentage)

Almost 83% of those included in the study believed that condoms prevented the transmission of HIV/AIDS. However, more than half of the total respondents also thought
that Female Contraceptive methods like Cu-T or Tubectomy too protected them from the virus, which is quite a misconstruction. The same is tabulated in Table 4 below.

**Table 4: Prevention of HIV/AIDS through male-female contraceptive devices**

<table>
<thead>
<tr>
<th>Contraceptive method</th>
<th>Number of respondents who said – (n=180)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male contraception methods like Condoms</td>
<td>Yes  149 (82.8)  No  21 (11.7)  Don’t know 10 (5.5)</td>
</tr>
<tr>
<td>Female contraception methods like Cu-T/ Tubectomy</td>
<td>Yes  102 (56.6)  No  64 (35.6)  Don’t know 14 (7.8)</td>
</tr>
</tbody>
</table>

(Figures in brackets give the percentage)

More than half of the total number of respondents were not in know-how of the availability of drug treatment modalities for HIV/AIDS, and almost 21% were not even aware of the existence of drug therapies for this scourge. Subsequently majority (92.2%) agreed that AIDS is a disease with fatal outcome. Here too 05 or 2.8% of the women were not aware of the fatality caused by this disease, which could be a matter of serious concern. Nine women said that the disease doesn’t have a terminal result. Table 5 details the perceptions on management and outcome of the disease.

**Table 5: Drug therapy and Outcome of the disease**

<table>
<thead>
<tr>
<th>Therapy / Outcome</th>
<th>Number of respondents who said – (n= 180)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Availability of Drug therapy</td>
<td>Yes  51(28.3)  No  92 (51.1)  Don’t know 37 (20.6)</td>
</tr>
<tr>
<td>Fatal outcome</td>
<td>Yes  166 (92.2)  No  09 (5.0)  Don’t know 05 (2.8)</td>
</tr>
</tbody>
</table>

(Figures in brackets give the percentage)

**Discussion:**

For almost 2-3 decades now, several strategies for prevention and control of HIV has been tried in different parts of the world (9). Reports from National agencies such as National AIDS Control Organization (NACO) and International agencies like the Centre for Disease Control (CDC), World Health Organization (WHO) and UNAIDS demonstrate that the increasing prevalence among women, esp. in the reproductive age-group poses a grave threat to the family and future generations, and to the society and nation, at large (10)! HIV among women is indeed a challenge that needs vigorous response from health care authorities.

Almost all the women approached to take part in the present study, enrolled themselves and took the questionnaire. Those that responded (180, 92.8%) were also willing for ante-natal screening for HIV and other STIs, and showed desire to undergo expert counseling on the subject matter. The survey results indicate adequate levels of knowledge of the modes of transmission of the HIV. However, additional and persistent efforts are still required in the minority with certain misconceptions and doubts, so as to dispel their
ignore ignorance especially on the role of casual contact and usage of public toilets, in transmission and spread of the disease. This is also important from the ‘stigma and discrimination’ point of view, a subject not touched upon in and beyond the scope of, the present study. To know that our society does have people even today, who don’t want to touch, eat with, share toilets with or use articles used by, those affected is quite appalling. A large percentage believed that blood donors could be at risk of getting the infection – which is again a point to ponder about and take corrective measures. It is unclear whether these kind of apprehensions among the population deter them from the noble act of donating blood – the life saving tissue, an aspect that needs further prodding into. This could be an extension of the general trepidation about blood donation or a poor understanding of HIV transmission modalities (11).

A high and positive response was seen as regards Ante-natal prevention of HIV/AIDS, though a large percentage of the pregnant women were unaware of the risks of Breast-feeding. This factor may not be highlighted adequately in many health programmes, as benefits of the Mother’s milk more often than not outweighs the risks of disease transmission especially in a poor resource setting (12). This could be applicable to the spouses of soldiers too, though today they form a part of the middle-income group.

The ignorance on safe sexual methods was a revelation, especially when the women-folk are being specially targeted for awareness and prevention strategies in all the HIV/AIDS programmes. Almost 60% of the women were mistaken on the role of homosexuality and few on the role of commercial female sex workers in spread of the disease (13). Condom promotion programmes seem to be showing positive results in that, the maximum number in the study group felt that these gave protection from HIV and STIs. Again, some of them having an opinion that even female contraceptive methods like Cu-T or Tubeotomy helped was quite erroneous. This ‘grey’ area needs to be addressed in an urgent manner, and on one hand while female contraception has to be encouraged among women of the reproductive age-group, the insistence on usage of a condom in spite of adoption of some method of contraception by the female needs to be encouraged, especially in cases where the HIV status of either or both partner is not known (14).

The poorest response rates were about lack of knowledge on availability of Anti-retroviral therapy (ART). This is a relatively recent phenomenon as far as our country and the services are concerned. Though it is supposed to be available free of cost to all those prescribed, in various designated Govt. hospitals, many a time the dwindling stocks tell a different story. Those, among the participants in this study, who were not aware about ART need to be educated. Much work is required in this direction in making the clientele oriented towards treatment as a means of improving the lifestyle and longevity (and not as a cure).

The spouses of soldiers come from rural and semi-urban backgrounds, mostly, and their knowledge on various aspects of the disease can be extrapolated to the society at large, conclusions drawn and aims and objectives revised for implementation of prevention programmes in the right direction towards the most needy. Women-folk are aware of the facts about spread of HIV but many still have poor comprehension of disease transmission or infectivity.

The numerical information brought forth by this study is surely a pointer towards the mere glitziness of our existing health programmes. These programmes must go beyond billboards, posters and media messages and be implemented in true letter and spirit by
dedicated and accountable workers. Adequate funds need to be mobilized and not mis-
utilized or misused.

Discussion groups and associations must be motivated and encouraged to answer and understand the ‘hows and whys’ of HIV/AIDS (15). Time is ripe that primary prevention through education and health promotion have to be complimented by the provision of services for STIs and contraception (16). Mandatory counseling before starting ART is one aspect that needs to be emphasized upon and practiced. Regular follow-ups are required to avoid false hopes and emergence of drug resistance.

Finally, the infrastructure built – up for HIV/AIDS prevention programmes over the past few years need to be continually protected, nurtured, expanded, and upgraded (17). More and more studies need to be undertaken regularly, to form the basis of making necessary preparations and modifications to our health programmes to make them more effectual and constructive for the community.

References :


