Comprehensive Survey to Study Awareness, Knowledge and Attitude Towards HIV/AIDS and Hepatitis B Amongst Dental Professionals Working in Rural India

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Abstract

Introduction Thirty years into the human immunodeficiency virus/acquired immunodeficiency syndrome (HIV/AIDS) pandemic, social and behavioral research on HIV/AIDS remains limited. Data on sexual behavior and AIDS-related knowledge and attitudes are sparse and difficult to compare. The present survey aims primarily towards acquiring unique source of information from health professionals in rural population in order to document AIDS and hepatitis B awareness. The Surveys is an attempt to contain a wealth of data on HIV/AIDS and hepatitis B which until now was not disseminated to rural audience.

Materials and Methods Pre-formed questionnaire of 45 questions will be given to all dental professionals, practicing in rural sector, willing to participate in study. Instructions will be given regarding filling the questionnaire. All participants requested to complete the questionnaire with best of their knowledge and without any assistance. Questionnaire were completed in front of author and collected back personally.

Conclusions The outcomes of the present study, it is clear that our efforts in the last two decades in spreading the knowledge about the disease have met with some limited success. The fact that increasing number of cases of HIV/AIDS are being reported from rural parts, there is certainly

a need to reorient the ongoing training programmes towards rural population.

Keywords Knowledge · Awareness · Dental professionals · HIV/AIDS · Transmission

Introduction

Every HIV positive patient is a potential candidate for disease transmission to the attending health care professional. So, the risk of accidental transmission of HIV in such cases, depends on their safe practices including universal precautions which in turn, depends on their awareness and knowledge regarding the epidemiology of the disease. The accidental transmission of HIV infection to health care professionals during occupational exposure, are the real threats today. Many such cases have been documented by NACO and various other researchers.

Research indicates that the South African construction industry has the third highest incidence of HIV/AIDS in South Africa. The construction sector has a predominantly migratory labour force, making it a prime contributor to the spread of HIV/AIDS. Labour camps are a breeding ground for the spread of HIV/AIDS and sexually transmitted diseases (STDs), this being compounded by the situation where migrant workers on contract are ignorant of the consequences of casual sexual relationships [1].

The federal republic of India has about 1,027 million inhabitants (according to the last census in 2001) and is divided into 29 states and six union territories [2]. The main religion in India is Hinduism (80.5 %) followed by Islam (13.4 %), Christianity (2.3 %), Sikh (1.9 %), Buddhism (0.8 %), Jainism (0.4 %) and other religions (0.6 %) [3]. The literacy rate is 65 % (76 % for men and 54 % for

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women) [2]. Two-thirds of the Indian people make their living as agricultural workers [4].

In the oral cavity, HIV/AIDS may particularly manifest itself in the development of oral candidiasis, oral ulcers, non-tender bilateral swelling of the parotid glands, and nodular tumours or Kaposi's Sarcoma [5]. These oral manifestations are often among the first symptoms of HIV/AIDS and thus can be useful in early detection of the disease [6]. Generating awareness regarding HIV/AIDS in this group is crucial for AIDS management and the prevention of HIV spread. To update health care workers' (HCW) knowledge about HIV/AIDS, various trainings are being conducted by government institutions as well as non-governmental organizations worldwide. Data regarding the baseline knowledge of HIV/AIDS amongst dental professionals of this faculty and impact of these training programmes are required to modify the contents of the programme further. Keeping these two objectives in view, a cross-sectional study was carried out to assess the awareness of dental professionals about HIV/AIDS and to identify the areas of confusion that might serve as an important aspect of educational intervention.

Methodology

The study was conducted during the period from 2011 to 2013 among 100 dental professionals in rural India. The reason for this time period of 2 years is that dental professionals in rural India are less as compared to urban India. Thus, to achieve the sample size we have scanned an area of almost 60 km diameter. The questionnaire was personally given to all participants at their workplace during authors' routine visits and filled up in front of one of the authors. The purpose of the study was explained to all the participants. One hundred dental professionals have filled and returned the questionnaire within of 15 min. Information was collected on a pre-designed, pre-tested and self-administered questionnaire (Table 1). They were informed that the whole exercise was confidential, anonymous, voluntary and purely for academic purpose. Questionnaires were distributed to all the professionals. Data collected were entered in Microsoft Excel programme and analyzed using the SPSS software.

Findings

Awareness About HIV/AIDS

All participants know that there is difference between HIV and AIDS. They all believe that social awareness prevent or reduces spread of HIV. 58 % believes that once infected,

patient can transmit the virus at all stages of life. 11 % were not sure when asked about spread of HIV by sharing food or utensils with HIV patients, while all of them know that it can spread by sharing needle. All of them were sure about definite spread from mother to child and spread through sexual contact. Importantly 53 % of professionals believe that HIV does not spread via saliva, whereas 20 % of them were not sure. 22 % believe that HIV spreads via feco-oral route, whereas 22 % were not sure. 58 % believe that HIV comes under contagious category. 95 % agree on the fact that HIV can spread via tattooing or body piercing.

Knowledge About Methods of HIV/AIDS Prevention

Fifty-six per cent believes that autoclaving completely destroys HIV, whereas 14 % were not sure about it. 78 % professionals state that there is no definitive treatment for HIV. 89 % believe that proper history taking prior to treatment reduces risk of HIV spread and all of them suggest that prevention is biggest cure of HIV. 97 % of the participants agreed to treat the patient infected with HIV, but 87 % of them know the universal prevention protocol and only 64 % of them know postexposure prophylaxis. When asked about their behavior towards colleagues with HIV, 95 % state that their attitude will not change, but 13 % were not sure about sharing cold beverage with them.

Awareness About Hepatitis

95 % knew that there is difference between Hepatitis A and B. They all believe that social awareness prevent or reduces spread of HBV. 35 % believe that once infected, patient can transmit the virus at all stages of life. 56 % do not agree, when asked about spread of HBV by sharing food or utensils with HBV patients, only 69 % know that it can spread by sharing a needle. 70 % were sure about definite spread from mother to child and 15 % were not sure about it. 72 % think that HBV spreads through sexual contact and 12 % were not sure. Importantly 64 % of professionals believe that HBV do spread via saliva, whereas 15 % were not sure. 43 % believe that HBV spreads via feco-oral route, whereas 49 % were of opposite opinion. 71 % believe that HIV comes under contagious category. 95 % agree on the fact that HBV can spread via tattooing or body piercing.

Knowledge About Methods of Hepatitis Prevention

69 % believe that autoclaving completely destroys HBV, whereas 17 % were not sure about it. 21 % dental professionals state that there is no definitive treatment for hepatitis. 89 % believe that proper history taking prior to treatment reduces risk of HBV spread and all of them suggest that prevention is biggest cure of HBV. 78 % of the

Table 1 Questionnaire and results

Sr. No.	Question	Yes	No	Not sure
1	Is there any difference between HIV and AIDS?	100	0	0
2	Hepatitis A and Hepatitis B are the same	1	95	4
3	Social awareness prevents spread of HIV	100	0	0
4	Social awareness prevents spread of HBV	92	7	1
5	Will you treat a patient infected with HIV?	97	3	0
6	Will you treat a patient infected with HBV?	97	3	0
7	Once infected with HIV can patient transfer the virus at all stages of life?	58	37	5
8	Once infected with HBV can patient transfer the virus at all stages of life?	35	48	17
9	HIV spreads by sharing food or utensils	0	89	11
10	HBV spreads by sharing food or utensils	37	56	7
11	HIV spreads by sharing needle with HIV patient	100	0	0
12	HBV spreads by sharing needle with HBV patient	69	21	10
13	HIV spreads from infected mother to child	100	0	0
14	HBV spreads from infected mother to child	70	15	15
15	HIV spreads by sexual contact with infected person	100	0	0
16	HBV spreads by sexual contact with infected person	72	16	12
17	HIV spreads via saliva	27	53	20
18	HBV spreads via saliva	64	21	15
19	Autoclaving destroy HIV completely?	56	30	14
20	Autoclaving destroy HBV completely?	69	14	17
21	HIV spreads via feco-oral route	22	56	22
22	HBV spreads via feco-oral route	43	49	8
23	There is definitive treatment for HIV	9	78	13
24	There is definitive treatment for HBV	72	21	7
25	Mortality is very high for HBV	69	17	14
26	Highest rate of transmission of HBV is through infected blood products	72	18	10
27	Are you vaccinated against HBV?	77	12	11
28	HIV is contagious	58	38	4
29	HBV is contagious	71	25	4
30	Proper history taking before dental treatment reduces risk of HIV and HBV	89	11	0
31	Do you routinely ask history of blood transfusion before treatment?	80	20	0
32	Prevention is biggest cure of HIV and HBV	100	0	0
33	HBV poses bigger threat than HIV	96	0	4
34	Long term survival rate of HIV is longer than HBV, without treatment	69	22	9
35	Tattooing and body piercing can be risk factors for HBV and HIV	95	0	5
36	Will your attitude change towards your colleagues if they contact HIV?	2	95	3
37	Will your attitude change towards your colleagues if they contact HBV?	8	82	10
38	Do you know about universal precaution protocol?	87	7	6
39	Do you use both hands to cap the needle after injecting?	39	54	7
40	Will you spend time with your friends if you come to know that they have HIV?	98	0	2
41	Will you spend time with your friends if you come to know that they have HBV?	79	11	10
42	Will you share cold beverage with friend who is known case of HIV?	78	9	13
43	Will you share cold beverage with friend who is known case of HBV?	18	75	7
44	Do you know about postexposure prophylaxis for HIV?	64	19	17
45	Do you know about postexposure prophylaxis for HBV?	65	22	13

participants agreed to treat the patient infected with HBV, of whom 87 % know the universal prevention protocol and only 65 % know post-exposure prophylaxis. When asked about their behavior towards colleagues diagnosed with Hepatitis, 82 % state that their attitude will not change, but 75 % will not share cold beverage with them.

Discussion

According to UNAIDS, as of 2007 globally, there were an estimated 33 million (30–36 million) people living with HIV in the world [7]. HIV/AIDS is a serious public health issue in the United States. Women of all ages can get HIV/AIDS, and they account for approximately 24 % of all HIV diagnoses [8, 9]. Women of color are particularly affected, as they accounted for two-thirds (64 %) of new AIDS diagnoses among women in 2010 [10]. HIV infection is not only a significant health problem but also one of the most important social issues of the twenty-first century. While the basic information about the disease like causative agent, modes of transmission, etc. were known to most of the participants, deficiencies in their knowledge and awareness in many critical areas of the disease were noticed.

These deficiencies in knowledge influence their behavior thus, exposing them to the risk of transmission. As it can be seen from the present study that misconceptions regarding transmission of the disease are high which can further lead to discrimination in patient care or apprehensions and stress amongst the dental care providers while dealing with such patients.

The level of awareness of AIDS is generally high. In over half of the countries, at least 90 % of the female population have heard of AIDS, and in more than three-fourths of the countries, at least 90 % of the male population have heard of the disease. However, awareness remains low in a few countries. In Bangladesh and Nepal, less than one in three married women have heard of AIDS.

In most countries, awareness of AIDS is higher among men than women. This gender gap reaches 34 % points in the Niger and 28 % points in Chad. Also striking are the gender differences in AIDS awareness in Bangladesh (19 % points), Benin (13 % points), Eritrea (17 % points), Mali (19 % points), Mozambique (12 % points) and Nigeria (15 % points) [11, 12].

Dental professionals' attitude regarding vaccination seems quite serious. Only 12 % of them were not vaccinated against HBV. They were not ready to accept blood donated by professional blood donors and were very particular about screening of blood for HIV and hepatitis B. Perhaps they were not aware of the fact that the probability of contracting the disease through blood or blood product is more than 90 %.

Dental professionals' knowledge regarding HBV and its spread is moderate. Twenty-one out of 100 were unaware of hematogenous route of HBV spread. 49 % were unaware of the feco-oral route of transmission. 21 % did not know about definitive treatment of hepatitis. Most of the participants knew the importance of history taking, and 80 % admit that they routinely ask about history of blood transfusion. Universal safety precautions were unknown to many and 39 % of participants follow risky technique to cap the needle.

Conclusion

From the outcomes of the present study it is clear that our efforts in the last two decades in spreading the knowledge about the disease have met with limited success. The fact that increasing number of cases of HIV/AIDS are being reported from various parts of the world, coupled with increased incidences and prevalence of the disease, suggests that there exist a certain need to reorient the ongoing training programme.

While on one hand, serious deficit in knowledge in specific areas need to be addressed, tremendous effort has to be put into devise strategies to convert the theoretical knowledge into 'safe practices'.

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