Original Research

PRACTICES ADOPTED BY PRACTITIONERS FOR ANTENATAL CARE OF HIV POSITIVE PREGNANT WOMEN IN SURAT CITY

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ABSTRACT

Background: Prevention of parent to child transmission services for HIV fails to reach most women in resource poor countries like India. The aim of present study is to know practices adopted by obstetricians for the same in HIV positive antenatal women.

Methods: This was a cross sectional study where practitioners registered in Surat Obstetric and Gynaecological Society (n=204) were personally interviewed with pretested semi structured questionnaire regarding antenatal services provided to HIV positive women. Analysis was done with Epi Info 7.

Results: One third of the participants did not provide care to HIV positive women and more than half never received training in HIV. Only two third were conducting pre test counselling and giving advice for correct infant feeding practices. Less than one third provided prophylaxis for opportunistic infections. One third participants knew about Highly Active Anti Retroviral Therapy and only 10% knew about Anti Retroviral drugs avoided in pregnancy.

Conclusion: There is a need to develop mechanism for training and subsequent updating of knowledge of obstetricians in HIV, especially in context to antenatal care.

Keywords: HIV, Antenatal, Obstetricians

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INTRODUCTION

In India, estimated 2.27 million people of age 15 to 49 years were living with HIV/AIDS in 2008, with overall HIV prevalence of 0.29%.[1] The median positivity rate of HIV among Antenatal Care (ANC) attendees in Gujarat was 0.26% in 2008.[2] Surat is having more than one percent ANC prevalence since last three years.[3] Only 20% of the estimated annual pregnancies had received counselling testing services for HIV in 2009.[3] Each day, nearly 1,500 young children are infected with HIV, Mother to Child Transmission (MTCT) being leading cause.[4] Treatment with Anti Retroviral (ARV) drugs can cut transmission of HIV by 40 to 70%, preventing more than 200,000 infants each year from contracting the virus from their mothers.[5] Unfortunately, Prevention of Parent to Child Transmission (PPTCT) services fails to reach most women in resource poor countries. In 2007, only 33% of HIV infected pregnant women in low and middle income countries received drugs to protect their babies from infection.[6] In India, PPTCT programme of National AIDS Control Programme (NACP) has been established by National AIDS Control Organization (NACO) with the aim of preventing transmission of HIV from an HIV infected pregnant mother to her newborn. PPTCT services in India cover about ten percent pregnancies. One of the reasons for poor accessibility of PPTCT is that a large number of ANC women get care from private providers. In India, deliveries taking place in private sector is 37.9% (Urban).[7] Therefore, it is of paramount importance that private providers adopt and adhere to NACO guidelines for PPTCT. National data on prevalence of HIV/AIDS among ANC attendee is generated only from public sector with established network of PPTCT/Integrated Counselling & Testing Centre (ICTC) services. There is no mechanism to monitor and evaluate services of HIV provided by private sector. This study aims to find out practices adopted by obstetricians to prevent parent to child transmission of HIV and to explore the lacunae, need for changes, sensitization and training to ensure that all HIV positive pregnant women receive proper care and treatment.

MATERIAL AND METHODS

Stud design: It is a cross sectional study

Selection and description of participants: All practitioners registered in Surat Obstetrics and Gynaecological Society (SOGS) both form private and public sector were included in the study. In public sector, the obstetricians from the New Civil Hospital, Surat; Surat Municipal Institute of Medical Education and Research (SMIMER), Surat; and Urban Maternity Homes were included. This study also included post graduate residents in Obstetrics and Gynaecology. Contact details of 250 obstetricians and residents were available from SOGS. Those who had never provided services to HIV positive women were also interviewed to know their plan of management for the same. Those participants who were not contacted after three visits were excluded for reasons as lack of time/refusal of consent. Thus, the final sample size was of 204.

Technical Information: A semi structured questionnaire was prepared based on literature review and information inputs from different obstetricians. A pilot study was carried out among five private obstetricians selected randomly to know suitability of questionnaire and appropriate changes were made. Participants in pilot study were excluded from main study. A recommendation letter was taken from the SOGS for participation and cooperation of practitioners. Participants were given prior intimation about visit to their clinic/hospital at their convenience.

Ethics: Before commencing study, the Institutional Ethical Committee (IEC) of SMIMER had approved the study. Questionnaire was filled by oral interview after informed consent. Strict confidentiality of personal details of participants was maintained by a unique code system.

Statistics: Data entry was done in Microsoft Excel followed by analysis in Epi Info 7.

RESULTS

Majority of the participants 100(48.99%) did hold Doctor of Medicine(MD) degree, 93(45.75%) held Diploma in Gynaecology & Obstetrics(DGO) qualification, 6(2.83%) participants were having Master of Surgery(MS) degree, while 5(2.43%) held Diplomat National Board(DNB) degree. Out of 204 participants, 154(75.36%) and 50(24.64%) participants were from private sector and public sector, respectively. Respectively 93(60.78%) and 48(94.11%) participants, form private sector and public sector provided antenatal care to HIV positive women.. Only 121(59.90%) participants had performed delivery of HIV positive women.

Table 1: Alternative Feeding Practices and Training

Alternative feeding practices advised	Trained practitioners	Untrained practitioners
Commercial infant formula	60(80%)	66(69.4%)
Home modified animal milk	34(45.33%)	37(38.9%)
Wet nursing	0	1(1.05%)
Expressed heat treated milk	3(4%)	2(2.1%)
Breast milk bank	24(32%)	25(26.3%)
Mixed feeding	5(6.6%)	5(5.26%)

Major reasons for referral to public sector by private practitioners were unaffordability 30(32.60%); lack of better facilities and counselling centres 22(23.91%); no isolation ward for delivery 13(14.13%); fear of losing other patients and staff 4(4.34%), if they come to know that HIV positive women are delivered in their clinic; and untrained staff to perform HIV positive delivery 6(6.52%). Training was received only by 84(41.79%) participants. Participants from public sector were more trained 36(70.58%) than private 48(31.78%). Most of 33(46.47%) received training from public sector agencies like NACO, Gujarat State AIDS Control Society(GSACS) and Surat AIDS Prevention & Control Unit(SAPCU). Twenty four (33.80%) participants received training from private agencies like Indian Medical Association (IMA), The Federation of Obstetric & Gynaecological Societies of India (FOGSI), SOGS. Two (2.81%) participants received training from Non Government Organizations (NGOs). Out of 28 participants who had seen more than 20 HIV patients, 16(57.15%) were trained (P VALUE: 0.11, OR: 2, CI: 0.8 to 4.6, on Chi square).

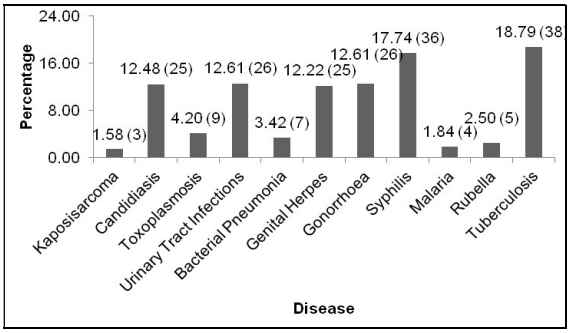

Figure 1: Diseases Screened by the practitioner (n=204)

Universal HIV testing is advised by 198(97.54%) participants, out of which 110(55.83%) go for opt in approach. Rest five (2.46%) advised testing only in case of family history, high risk behaviour, residing in slums, and doubt of venereal diseases. From those who received training 67(80.72%) and from those who did not receive training 68(60.18%) performed pre test counselling (P VALUE: 0.0021, OR: 2.8, CI: 1.4 to 5.4, on Chi square). In private sector, only

4(4.44%) participants had trained counsellor, 80(88.89%) participants do counselling themselves and 6(6.67%) refer women to other centres. While in public sector, trained counsellor is available for 49(98%) participants. Hundred one (51.01%) participants did not know about the number of tests done for screening HIV.

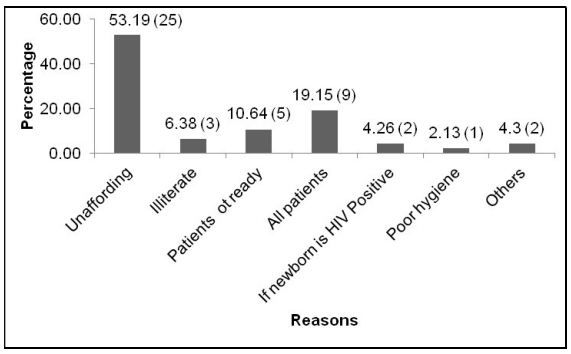

Figure 2: Reasons for Exclusive Breast Feeding (n=47)

More untrained 67(58.77%) than trained 34(40.4%) participants did not know about the number of tests performed for screening HIV (P VALUE: 0.013, OR: 2.1, CI: 1.2 to 3.7, on Chi square). Forty six (17.97%) participants did not know which test is done for screening. Hundred and ninety (95%) of the participants advised for testing of HIV in children born to HIV positive women, while all participants advised testing of husband of HIV positive women. As seen from figure 1, diseases maximally screened by participants in HIV positive antenatal mothers were Tuberculosis 38(18.79%) and Syphilis 36(17.74%), whereas the least screened disease was Kaposi Sarcoma 3(1.58%).

Table 2: Prophylaxes for OIs given by the practitioner

Prophylaxis for OIs given for	Practitioners (%)
Bacterial infection	1(5.26)
Candida	4(21.05)
Herpes	1(5.26)
Pneumocystis carinii	1(5.26)
Secondary infections	1(5.26)
Sexually Transmitted Diseases	2(10.52)
Toxoplasmosis	1(5.26)
Upper Respiratory Tract Inf.	3(15.78)
Urinary Tract Infections	3(15.78)
Vaginal infection	2(10.52)
Total	19(100)

Hundred ninety five (98.48%) participants advised HIV positive antenatal women regarding the need of adequate diet & nutrition during pregnancy. Difference does not exist between trained 83(100%) and untrained 110(97.34%) participants with regards to this advice being given (Fisher exact P value: 0.26). In the first & second trimester maximum participants, that is 102(68.92%) and 69(46.94%) respectively, recommended at least three ANC visits to HIV positive antenatal women. Whereas in the third trimester, majority 71(48.30%) of the participants advised six ANC visits to HIV positive antenatal women. Hundred thirty(67%) participants were advising regarding infant feeding practices in antenatal period, and trained practitioners were advising it more than untrained ones(P VALUE:0.010, OR:2.3, CI:1.2 to 4.3, On Chi square). Sixty one (64.21%) participants prefer giving it in third trimester. Only 52(27.51%) participants advised Exclusive Breast Feeding(EBF). As seen from figure 2, maximum 25(53.19%) participants gave unaffordibility on the part of patient as the main reason for advising EBF in positive mothers. More trained participants advised to stop feeding abruptly at six months 16(44.44%) and four months 6(16.67%), as compared to untrained participants 8(25.8%) and 1(3.22%) respectively (P VALUE:0.0016,OR:3.4,CI:1.2 to 9.2, On chi square). As evident from table 1, 60(80%) trained and 66(69.4%) untrined participants advised commercial infant formula to HIV positive antenatal women in place of breast feeding, if patient is affording it. From total, 34(45.33%) of trained and 37(38.9%) of untrained participants also thought home modified animal milk as a good alternative feeding option.

Table 3: Selecting Patient for Viral Load

Reason for selecting patient for viral load	Practitioners (%)
Advanced stage of disease(HIV)	1(3.33%)
Viral load done for all HIV positive antenatal women	7(23.33%)
Bad Obstetric History(BOH)	1(3.33%)
CD4<350/mm^3	16(53.3%)
Human Papilloma Virus Positive	1(1.33%)
If affordable patient	1(1.33%)
Opportunistic Infections	3(10%)
Total	30(100)

Only 19 of total participants were actually giving pprophylaxis for Opportunistic Infections (OIs) to HIV positive mothers as shown in table 2. Only 39(20.10%) participants had facility for CD4 count, while rest sent patients to public sector hospitals 28(22.4%), corporation hospitals 2(1.6%), private laboratories 95(76%). CD4 count was advised as soon as patient was diagnosed HIV positive by 19(30.88%). 6(20%) participants preferred to do HIV viral load in all HIV positive antenatal women, whereas 16(53.3%) and 3(10%) preferred going for viral load in cases of CD4 count <350/mm^3 and presence of OIs only, as seen from table 3. As seen from table 4, 20(28.16%) participants used CD4 count<350/mm^3 as one of the criteria to start ART

as prophylaxis for MTCT in HIV positive antenatal women. And 32(43.24%) participants used the same criteria to give ART as treatment of HIV also, in HIV positive antenatal women. Hundred thirty seven (69.5%) participants referred patients to public sector hospitals for ART. The main reason being cost factor 60 (43.68%).

Table 4: ART as Prophylaxis & Treatment

ART given as prophylaxis	Frequency (%) of practitioners	ART given as treatment	Frequency (%) of practitioners
AIDS	2 (2.81%)	AIDS	4 (5.4%)
Given in all HIV positive cases	12 (16.90%)	Given in all positive cases	8 (10.81%)
Depending on CD4 count (count not specified)	18 (25.35%)	Depending on CD4 count (count not specified)	21 (28.3%)
CD4<350/mm^3	20 (28.16%)	CD4<350/mm^3	32 (43.24%)
CD4>350/mm^3	8 (11.26%)	CD4>350/mm^3	2 (2.70%)
Don't know	1 (1.4%)	Don't know	1 (1.35%)
Husband positive	2 (2.81%)	Husband positive	1 (1.35%)
Refer for treatment	2 (2.81%)	Refer for treatment	1 (1.35%)
Asymptomatic patients	1 (1.4%)	NACO guidelines	1 (1.35%)
In PPTCT services	5 (7.04%)	OIs	3 (4.05%)
Total	71 (100)	Total	74 (100)

The commonly prescribed ART regimen was Highly Active Anti Retroviral Therapy (HAART) long term 47(56.62%) with only 36(43.37%) prescribing short term regimen. Trained practitioners prescribed HAART long term more 28(62.22%) than untrained 19(50%) (P VALUE: 0.26, OR: 1.6, CI: 0.7 to 3.9, On Chi square). Only 21(10.29%) responded about ARV drugs avoided in pregnancy. Participants usually avoided Efavirenz (EFZ) 12(57.14%), Indinavir 3(14.28%), Stavudine 1(4.76%), Didanosine 1(4.76%) and Zidovudine 1(4.76%). Trained participants avoided EFZ more than untrained (Fisher exact P VALUE: 0.13, OR: 2.9, CI: 0.8 to 13.9, On Chi square).

DISCUSSION

Majority of participants have Medical Counsel of India (MCI) approved degree indicating that they are highly qualified and will provide good care. Majority of obstetric services in Surat are provided by private sector where practitioners are not trained to provide care to HIV positive pregnant women, which could lead to increase in MTCT. This is an area where public private partnerships (PPP) could be explored. More than one third participants never delivered HIV positive women because more than half of them never received training in HIV and so they are not well versed with HIV care. Almost half of trainings related to HIV were conducted by NACO and GSACS mainly focussing on health personnel from public sector, neglecting large private sector which caters to a higher proportion of population.

In present study almost all (97%) participants practiced universal screening of HIV in all ANC mothers. Literature review suggests that except few issues of acceptance, universal screening of ANC women by 14 weeks of gestation and screening infant after birth is the recommended strategy, with cost savings of $1,122,787 and health benefits of 310 LYG (Life Year Gains).[8] Research has proved that testing of HIV on an "opt out" rather than "opt in" basis increases its uptake; still almost half of the participants in the study practice compulsory opt in approach for HIV testing. Only two third participants conduct pre-test counselling before HIV testing. Trained counsellors were available only in public sector. Pre test counselling empowers the individual to face the HIV test result. Screening practices for OIs was also not satisfactory. Ideally, all HIV positive pregnant women should be screened for genital infections including Chlamydia Trachomatis, Neisseria Gonorrhea, Bacterial Vaginosis, Candida infection, Trichomoniasis and Herpes Simplex early in the pregnancy, and again in the third trimester.[9]

Maternal nutrition is important factor to be considered during antenatal period; however, there is no evidence demonstrating its benefit in preventing MTCT. Only two third of the participants were giving advice with regards to correct infant feeding practices, which is crucial in order to make an informed decision on how women would like to feed their infants.[10] From total, 72.49% of participants did not advise EBF, showing their awareness about transmission of HIV through breast milk. Breast milk contains HIV virus and accounts for a 14% risk of transmission. As seen in present study, major reason for EBF is that, commercial infant formula is not affordable to HIV positive antenatal women, which is more prevalent in lower socio economic class. Two third of the participants advised EBF for 6 months or less, to prevent HIV transmission through breast milk and mixed feeding.

About three fourth of the participants did not have facilities for CD4 count in their setup, thus referring

their patients to private laboratories, where confidentiality may be a concern. Only one third of the participants knew about the HAART regimen and ARV drugs. ART reduces MTCT by reducing maternal viral load, and thereby decreasing viral exposure to the fetus.[11] HAART is recommended for pregnant women with CD4 counts lower than 200 to 350/mm^3 or HIV viral load exceeding 1000/ml. EFZ, the preferred Non Nucleoside Reverse Transcriptase Inhibitor (NNRTI) for non pregnant adults, is not recommended for use in first trimester because of animal data showing risk of anencephaly, microophthalmia, facial clefts and several neural tube defects.[12]

Conclusion: Due to fear of losing other patients, almost one third of private practitioners do not provide ANC to HIV positive women and refer them to public sector. But there is no confirmation that the women actually reach the desired place, indicating the need of proper linkage between two sectors to trace such women, who if lost are dangerous source of transmission in community. There is also need to motivate private practitioners to provide care to such women so that the burden on public sector is reduced. Displaying positive messages in their hospitals with regards to following of universal safety precautions is helpful in this regards. Setting up training of medical and paramedical staff on HIV/AIDS in areas of ANC, ART, diagnosis etc. and subsequent updating of their knowledge is the urgent need of the hour, as more than half of the participants, especially from private sector, were found untrained and unfamiliar in HIV care in present study .Since trained counsellor for HIV are available only in public sector and counselling is a special expertise skill, there is need to impart makeshift training on "Counselling" to paramedical staff of private sector who could than take care of pre and post test counselling of the sector. As commercially available food formulas are very expensive and out of reach of lower class families, they continue to opt for EBF despite its harms. Government can step in here by providing it free of cost to below poverty line (BPL) families.

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