Pattern of Presentation of Newly Diagnosed Persons living with HIV/AIDS Infection in Uyo, South-South Nigeria.

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Summary

HIV/AIDS is a significant cause of morbidity and mortality worldwide. In countries with poor healthcare infrastructure facility development and services, symptoms at initial presentation may be non-specific leading to poor decision-making and management. The objective of this study was to determine the pattern of presentation of newly diagnosed persons with retroviral infection in Uyo, South-South Nigeria. Between January and June 2010, a total of 1024 new patients attending the general outpatient clinic of the University of Uyo Teaching Hospital, Akwa Ibom State, were screened for retroviral infection and pattern of presentation using rapid immunoassay method based on the principle of immunochromatography as well as pattern of presentation of those who tested positive. Of the 1024 patients attending the clinic, 315 (30.8%), consisting of 107 (34.0%) males and 208 (66.0%) females tested positive. The patients ranged in age from 15 years to greater than 40 years. All the teenagers were female patients (1.9 %). The majority of the patients were between 25-29 years (28.6%). A total of 78 patients (24.8%) only knew of their HIV status while conducting voluntary counseling and testing (VCT) for some other medical reasons. Major reasons for presentation was weight loss in 18.1 % of patients, prolonged unexplained fever,14.9%; diarrhoea, 6.7%; skin rashes, 6.7 %; cough, 2.9 % and a combination of 2 or more symptoms in 26.0 % of the patients. HIV infection is common among patients attending primary care clinics. Although many of the patients presented with primary symptoms of weight loss, prolonged fever, diarrhoea, skin rashes and cough, a significant number of them came with apparently non-specific health concern. This strongly highlights the need for high index of suspicion of HIV infection in persons attending clinics for other medical conditions especially when the symptoms are multi-

Key words: *HIV; Newly Diagnosed; Patients; Pattern of Presentation; Nigeria.*

Introduction

HIV infection still constitutes major Public health issue globally.[1] In many sub-Saharan African countries, HIV/AIDS pandemic has almost completely erase progress made over the years at improving quality of life and life expectancy. Since the vast majority of people affected are in their prime age of productivity, HIV/AIDS significantly affect the country's workforce and slows down economic activities and social progress thereby affecting national economic growth and productivity.[1] The burden could better be understood by considering its effect also on households/ communities. The direct and indirect negative impact on healthcare delivery, school attendance and literacy level in many developing countries has assumed unprecedented proportion judging from the depreciating standards of living and health facilities development. The adjustments to life of persons living with the disease and care-givers has been a major concern, as all require some form of support for improved quality of life.

In Nigeria, it is estimated that about 3.9 % of the people are living with HIV/AIDS.[1-2] The recent national HIV explosion of over 5% prevalence, with localized epidemics mainly in Niger Delta region is alarming.[3-4] This epidemic is attributable to the influx of activities from oil exploration with changes in social and

economic status of individuals and communities.[5] Although oil exploration activities in the region may seem to suggest that there is an improvement in the standard of living of the people, however, the recent increase in various anti-social activities such as kidnapping, rape, prostitution, cultism and other forms of violence are indication of struggle for economic survival and perceived comfort. Studies[6-8] have shown that deteriorating economic and living conditions of people increases the likelihood that people, especially adolescent girls, will engage in behaviours which will make them susceptible to HIV infection/AIDS. Ignorance of HIV sero-status will cause infected persons to present late and of course make them more likely to continue the spreading of the virus.[9] However, presentation for testing requires the perception of being at risk of infection by the subject or a higher level of suspicion among clinicians of all specialties.[10]

Due to the decay in health infrastructure in most developing countries like Nigeria, facilities for testing and possible staging of HIV infection using CD4 Count and Viral load estimation are either inadequate or not available in most centers. The physician practicing in these areas will therefore need to develop skills that allow him/her to be involved proportionately in the control of HIV/AIDS. This study examines the pattern of presentation of new outpatient attendees living with retrovirus infection using clinical symptoms of patients only at presentation. It is hoped that the findings of this study will provide additional information that could alert clinicians practicing in this region on probable cases for early diagnosis, control and management even in the face of poor health infrastructural development especially in the rural areas where the majority of the people reside and carry out their daily routines.

Materials and Methods

Location of the study: The study was carried out at the general outpatient clinic of the University of Uyo Teaching Hospital (UUTH), Uyo- a community in Niger Delta region South-South Nigeria. The UUTH, a 400-bed hospital was established in 1996. It is situated on the outskirt of Uyo, the capital of Akwa Ibom State - a major oil producing state in Niger Delta region. The hospital is the only tertiary health institution serving about 3.9 million people of Akwa Ibom State aside from the neighbouring states of Abia, Cross River and Rivers. Recently the hospital was designated as one of the primary centres in the country for the management of people living with HIV/AIDS.

METHODS: This was a prospective study of 1024 new patients who were referred to the HIV/STI clinic from various outpatients' clinics either on account of symptoms related to HIV or for voluntary counseling and testing (VCT) in the University of Uyo Teaching Hospital, Uyo between January and June 2010. All the screened clinic attendees, whose serum initially tested positive for retroviral infection using the rapid immunoassay method (based on the principle of immunochromatography) were referred to the Virology department for further confirmatory testing. The confirmatory test was done using the Unigold Biotech HIV test kit (manufactured by Trinity Biotech PLC, Bray, Ireland) based on the immunochromatographic sandwich principle. Procedures adopted for all the tests and the interpretations of the results were in accordance with the manufacturers' specification. Only the subjects who participated in the final confirmatory testing and tested positive were included in the study group. The tests were carried out by the Technologists in Microbiology/Virology Department of the hospital. Informed consents were obtained from the participants. Prior to the testing; every participant took part in a pretest counseling which was arranged during each clinic day throughout the period of the study by the researchers. For those subjects who reported to the hospital due to their feeling of unwell, effort was made to elicit the earliest and most important symptoms of illness or concern to the patient. A semi-structured sociodemographic questionnaire was used to obtain information from the subjects including their biodata such as sex, age, education, occupation and marital status etc. The study was approved by the ethical committee of the University of Uyo Teaching hospital. Those perceived to be very ill or that have developed full blown AIDS were excluded from the study.

STATISTICAL ANALYSIS: Data was analyzed using Social Sciences Statistical Package (SSPS) version 17.0. Statistical analysis of simple frequencies were done and chi-squared analysis was calculated to determine the level of significance (p=0.05). The results of analysis are presented below.

Results

Sociodemographic characteristics of the respondents

Overall, 421(51.1%) of the 1024 patients completed the confirmatory testing and submitted their results. Of these, 315(74.8%) were confirmed positive while 106(25.2%) tested negative. For the purpose of this study, only the 315 subjects were recruited into the study group. Table 1 shows the Sociodemographic characteristics of the respondents. The 315 newly diagnosed HIV subjects were made up of 107(34.0%) males and 208(66.0%) females. Majority of the subjects, 90(28.6%) were between 25-29 years of age with male to female ratio of approximately 1:4. Female preponderance in this study was statistically significant (p=0.001, df=1, x^2=11.11). Forty two (39.2%) male and 31(14.9%) female subjects were greater than 40 years of age. There was no male patient between 15-19 years age bracket while 6(2.9%) were female subjects. Forty three (40.2%) males and 103(49.5%) females had completed secondary education. Fifteen (14.0%) males and 12(5.8%) females had no

Table 1 Showing the Sociodemographic characteristics of the subjects

Variables Age (in years)	Subjects Male n(%)	Female n(%)	Total n(%)
15 - 19	0(0)	6(2.9)	6(1.9)
20 - 24	9(8.4)	23(11.1)	32(10.2)
25 - 29	19(17.8)	71(34.1)	90(28.6)
30 - 34	12(11.2)	53(25.5)	65(20.6)
35 - 39	25(23.4)	24(11.5)	49(15.6)
>40	42(39.2)	31(14.9)	73(23.2)
Level of education			
No formal education	15(14.0)	12(5.8)	27(8.6)
Primary	28(26.2)	33(15.9)	61(19.4)
Secondary	43(40.2)	103(49.5)	146(46.3)
Post secondary	21(19.6)	60(28.8)	81(25.7)
Marital status			
Single	40(37.4)	119(57.2)	159(50.5)
Married	67(62.6)	74(3)	141(44.8)
Widower /widow	0(0)	13(6.3)	13(4.1)
Separated	0(0)	2(0.9)	2(0.6)
Occupation			
Unemployed	21(19.6)	66(31.7)	87(27.6)
Employed	86(80.4)	142(68.3)	228(72.4)
Tribe			
Indigenes	97(90.7)	193(92.8)	290(92.1)
Ibo	6(5.6)	3(1.4)	9(2.8)
Yoruba	1(0.9)	0(0)	1(0.3)
Hausa	2(1.9)	1(0.5)	3(1.0)
Others	1(0.9)	11(5.3)	12(3.8)
Total	**107(100.0)**	**208(100.0)**	**315(100.0)**

Table 2 showing the pattern of presentation of subjects

Symptoms at presentation	Subjects		
	Male n(%)	Female n(%)	Total n(%)
A. Medical conditions.			
Weight loss	21(19.6)	36(17.3)	57(18.1)
Diarrhoea	12(11.2)	9(4.3)	21(6.7)
Rashes	0(0)	21(10.1)	21(6.7)
Unexplained fever	25(23.4)	22(10.6)	47(14.9)
Unusual cough	3(0.8)	6(2.9)	9(2.9)
Two and above Complaints	25(23.4)	57(27.4)	82(26.0)
B. Voluntary counseling and testing (VCT)			
Pre-Marital Testing	6(5.6)	22(10.6)	28(8,9)
Pre-Blood Donation Testing	7(6.5)	0(0)	7(2.2)
Pre-Employment Testing	3(2.8)	5(2.4)	8(2.5)
Routine antenatal examination	0(0)	15(7.2)	15(4.8)
Routine self examination	7(6.5)	13(6.3)	20(6.3)

formal education. A total of 290 (92.1%) subjects were indigenes; 9(2.8%) were Ibos; 3(1.0%) Hausas while only one (0.9%) subject was of Yoruba tribe. Other Nigerian minority tribes constituted 12(3.8%). Of the single subjects; 119(57.2%) were females, 40(37.4%) were males while married subjects were 74(35.6%) females and 67(62.6%) males. There was no widowed or separated female subject. A total of 21(19.6%) male and 66(31.7%) female subjects were unemployed while 86 (80.4%) male and 142(68.3%) female subjects were gainfully employed.

Pattern of Presentation of patients with HIV infection.

As shown in table two, 21(19.6 %) male and 36(17.3 %) female subjects who presented due to ill-health condition did so due to unexplained weight loss. Unexplained fever was the reason for presentation in 25(23.4 %) male and 22(10.6 %) female subjects while 25(23.4 %) male and 22(27.4 %) female subjects presented with more than one symptom viz; diarrhoea, fever, cough and rashes in various occurrences. Twelve (11.2%) male and 9(4.3 %) female subjects presented due to recurrent diarrhoea episodes. Twenty one (10.3%) female subjects and nil male presented with skin rashes. Three (0.8%) male subjects and 6(2.9 %) females presented due to prolonged episodes of cough.

For the 78 patients who were diagnosed while undergoing voluntary counseling and testing (VCT); 6(5.6%) males and 22(10.6 %) females were diagnosed during pre-marital testing as a requirement by their churches for wedding. Seven (6.5%) male and 13(6.3 %) female subjects were diagnosed while undergoing routine self medical examination while 15(7.2%) females were diagnosed during routine antenatal screening. Those diagnosed during pre-employment testing were 2(1.9%) males and 7(3.4%) females while 7(6.5%) males were diagnosed during routine pre-blood donation testing.

Patient's fear about HIV infection

Table 3 shows the fear about HIV infection among the respondents. Of the 315 subjects, 90(84.1%) and 153(73.6%) of the male and female subjects respectively were afraid of being stigmatized while the rest either gave no response or were not worried about social stigmatization (X^2 4.163, P=0.041).This was statistically significant. Four (3.7%) male against 39(18.8%) female subjects were afraid of losing their spouse or friends (X^2 13.56, p=0.001). This was also statistically significant. Losing job was a major concern of the male subjects, 65(60.7%) against 16 (7.7%) of the female subjects(X^2 105.6, p=0.001). This was

Table 3. Showing subject's fear about HIV infection

Variables	Subjects			
	Male n (%)	Female n(%)	X^2	P-value
Sigmatization				
Yes	90(84.1)	153(73.6)	4.163	0.041*
No	15(14.0)	49(23.6)		
No response	2(1.9)	6(3.8)		
Loss of spouse or Friends				
Yes	4(3.7)	39(18.8)	13.56	0.001*
No	101(94.3)	165(79.3)		
No response	2(2.0)	4(1.9)		
Loss of Job				
Yes	65(60.7)	16(7.7)	105.6	0.001*
No	39(36.4)	187(90.0)		
No response	3(2.9)	5(2.3)		
Death				
Yes	76(71.0)	153(73.6)	0.109	0.74
No	23(21.5)	42(20.2)		
No response	8(7.5)	13(6.2)		
Transmission to others				
Yes	3(2.8)	51(24.5)	23.30	0.001*
No	98(91.6)	148(71.1)		
No response	6(5.6)	9(4.4)		

statically significant. Only 3 (2.8%) of the male subjects as against 51(24.5%) of the female subjects were afraid of the possibility of transmitting the virus to their sexual partners while 98(91.6%) males and 148(71.1%) females were not afraid of such possibility (X^2 23.30, p=0.001). This was also statistically significant. Seventy-six (71.0%) of the male subjects and 153 (73.6%) of the female subjects were concerned about eventual death from HIV infection while 23(21.5%) and 42(20.2%) of male and female subjects respectively were less concern about event of death. The remaining subjects were indifferent.

Discussion

The findings of this study show increasing prevalence of retroviral infection among patients attending medical clinics in our environment. One major concern is the variable pattern of presentations, as well as the standard of healthcare development and manpower to cope with the associated problems. The fact that there is a significant number of people in this study who attended the clinic not just for the detection of HIV infection suggest that much work need to be done in terms of awareness campaigns in our environment. Our study shows that 30% of the patients who completed the confirmatory testing tested positive for retroviral infection. This trend could have extensive implications for our national growth and development since HIV affect people in their prime age of productivity. More worrisome is the fact that more than half of those who were referred for confirmatory testing defaulted and were lost into the society to continue the spread of the disease for those that would have been diagnosed and counseled. Stigmatization against persons living with HIV/AIDS is a major problem in our environment.[10] The high rate of patient's default in this study could be due to the patient's fear or perception of being stigmatized if confirmed and hence preferring to live secretly with the disease. This could in part explain the high rate of default among subjects who were referred for confirmatory testing

despite well organized counseling sessions provided for them. With the increasing level of poverty, the quality of life among those living with the disease and their dependents no doubt would be seriously affected.

Our study also demonstrates the basic sociodemographic characteristics of persons living with retroviral infection. HIV/AIDS affects young and active age group and majority of the people were below the age of 40 years. More than 60% of patients were females. The preponderance of females with female to male ratio of 2:1 in this study is not surprising. This is similar to the global occurrences[11] and studies done in other parts of Nigeria.[12-14] However, it is clear that the younger females suffered more from HIV/AIDS scourge. Several factors, such as poverty, cultural perception and use of unsterilized infected instrument during child delivery have been found to contribute to increasing rate of HIV/AIDS in women. The social and economic inequalities adversely affect women in terms of basic needs and opportunities, including access to education, employment and social responsibility.[15] In many rural societies, women are not culturally expected to discuss sexuality, and may face serious abuse by the male counterpart on refusal of sex. There is also abundance of evidences that early and forceful marriages are known to contribute to increasing retroviral infection rates among female population.[16-17] In many cultures it is acceptable for the men only to have sexual partners outside marriages-a custom that invariably encourages polygamy and spread of HIV infection. Certain key factors, such as young age, lack of education and low social status are known to prevent young married/ unmarried girls from negotiating preventive measures, including condom use during sex which could protect against HIV transmission and other sexually transmitted infections.[18] More than 50% of the subjects were not married. This may not be unconnected with the decline in economic fortune of the young men consequent to the effect of oil exploration and environmental degradation in the region[19] their abandonment of the traditional occupation without substitutes, This implies that many young men may be incapable of funding/sustaining quality marriage relationships hence their likelihood to engage in premarital sexual relationships with its attendant risk of transmission of STI/HIV infection.

Fear of stigmatization was a major concern of the subjects. Expectedly, this may cause them to shy away from subjecting themselves for voluntary testing-a behavior that is inimical to HIV control in this region. This observation may not be unconnected with the prejudices and stereotypes people have against persons living with HIV/AIDS.[20] Swindells et al[21] also showed that there is a general deeply ingrained negative and resentful attitude toward people living with the HIV/AIDS. HIV-related stigma and discri- mination are major barriers to social affiliation and integration.[15]

Majority of our subjects were concerned about the possibility of losing their jobs and spouses if their HIV status were known to others but cared very little about the risk they constitute to others. Subjects in both sexes were suffici- ently knowledgeable about death as an eventual end of HIV infection. This probably means that knowledge about HIV infection as incurable illness is high among the participants though at the expense of realizing the risk of transmitting the virus to their sexual partners.

A number of subjects, 26% females and 21% of males knew of their HIV sero-positive status while undergoing voluntary counseling and testing (VCT) for other causes such as antenatal booking, pre-voluntary blood donation, pre- marital tests and pre antennal booking testing among others; Kiertiburanakul et al[22] in Thailand reported accidental diagnosis of HIV infection in 41% of patients who were screened for other medical conditions. This finding underscores the need to scale up the voluntary counseling and testing (VCT) component of HIV-prevention activities in Nigeria especially among highly vulnerable group. We observed that patients within 25-29 years age bracket constituted 28.6% of the total disease burden. Prevalence of HIV infection among the unmarried persons was significant. This is not surprising since people in this age bracket are more sexually active and are prone to high risk sexual behaviours like having multiple sexual partners thus making them more vulnerable. The observed trend possibly means that there is loss of hitherto protected social

norms and values about sexuality in this region.

The fact that only a sizeable number of participants availed themselves with voluntary testing and counseling (VCT) services even at no cost to them is an indication that many still live with HIV infection in our communities without knowing. This could have a wider implication as continuous spread and transmission of the disease among the general population would be unabated. The issue of HIV/AIDS test kits in primary care settings is a welcome development but more is still needed to be done to support sustained utilization of services provided by these service centers. In an environment such as ours, with a high level poverty and poor healthcare services, early detection is one of the most important strategies in the successful control and management of HIV/AIDS. Co-morbidity with other medical conditions could lead to misdiagnosis and poor care.

As shown in this study, 18.1% of total number of patients (19.6 % of males and 17.3% of the females separately) presented with weight loss and 6.7% presented with diarrhoea (11.2% males and 4.3% of females). This pattern of presentation turned out to be part of the HIV infection symptoms in this population. This trend is similar to that reported by Akolo et al[14] although much lower in corresponding percentages t. Studies have shown that present-ations with multiple symptoms are not uncomm-on in HIV patients.[23-24] In this study, 26.0 % of the patients (23.4% of the male and 27.4 % of the females) presented with multiple symptoms. Immunosuppression is the hallmark of HIV infection. The level of immunosuppression has been linked with the development of opportunistic infection.[25-27] Consequently, symptoms may be varied depending on site of involvement. Gastrointestinal opportunistic infection with candida organisms may present with buccal mucosal lesions as well as diarrhoea, whereas hepatic parenchymal and biliary disease may be a result of Cryptosporidium parvum infection." As noted above, presenta-tion with diarrhea may be related with some level of GI opportunistic infection. Skin rashes and unusual cough although may be the only and/or initial symptoms indicating retroviral infection are also non-specific. Interestingly,

skin rashes were reported by 6.7% of the female subjects only. This may be due to the fact that females generally are often emotional, highly sensitive and conscious of their appearance in public, therefore would seek explanation from a health worker reason for changes on their skins.[28]

Unexplained fever was reported in 23.4% of the males and 10.6% of the females. Fever as a symptom may follow any systemic disease including viral syndromes, pneumonias, malaria, Otitis media especially in children, urinary tract infection, tuberculosis etc. As shown by Bebell[29] in Uganda, as much as 11% of patients primarily managed for malaria infection at various centres turned out to be HIV infection. It should also be noted that where strong index of suspicion exist, the negative serology report may not absolutely rule out the possibility of HIV infection. This fact was corroborated by Aggarwal et al[23] who reported HIV infection in a 15 years old patient with unexplained fever whose first serology result was negative. In the sub-Saharan Africa, malaria is endemic and generally present with febrile illness. Empirical treatment with anti malaria is common especially in the rural areas where facility for laboratory diagnosis may not be available. Apart from resistance to anti malaria when proven, failure of resolution of symptoms should alert the clinician especially where risk factors for HIV infection are also present. HIV infection may co-exist with malaria infection[25,30] This implies that clearance of the parasites may be achieved with anti malaria without resolution of symptoms.

In conclusion, this study has shown that HIV/AIDS is common in general medical clini-cs. The non appearance of primary symptoms may be misleading, and could result in misdiagnosis. Therefore, since prevention still remains the key to control, efforts must be made to strengthen strategies aimed at increasing awareness and encouraging people to take seriously the issue of voluntary counseling and testing(VCT) at all times. It is also important for the primary care physicians to upgrade their skills in order to demonstrate a high index of suspicion that lead to the diagnosis of HIV/AIDS presenting atypically. Furthermore,

to improve the quality of life in people living with HIV/AIDS, there is also need to equip our clinics to enhance early detection and care. This can be enhanced through training of manpower and strengthening of various counseling units to sustain massive awareness campaign in our environment.

References

1. National response on HIV/AIDS epidemic (2010), United Nations General Assembly (UNGASS) Country Progress report : Nigeria

2. National Intelligence Council. The next wave of HIV/AIDS: Nigeria, Ethiopia, Russia, India and China 2002 (http://www.cia.gov/nic/pubs/other_pro ducts/ICA%20HIV-AIDS. Accessed on 20 July 2011

3. Adebola AA, Omololu FO and Odutolu O. HIV Risk Perception and Constraints to Protective Behaviour among Young Slum Dwellers in Ibadan, Nigeria. J. Health Popul Nutr. 2007; 25:146-157.

4. FMOH: Nigeria HIV/AIDS-adult prevalence rate 2010, www.cia.gov/ library/publications/the-world fact book/fields/2155.html. accessed 20 July 2011

5. Abasiubong F, Ekott JU, Bassey EA, Etukumana EA & Edyang-Ekpa, M. Quality of Life in People living with HIV/AIDS in Niger Delta Region, Nigeria. J of Mental Health 2010;19: 211-218.

6. Zulu EM, Dodoo FN, Ezeh AC. Sexual risk taking in the slums of Nairobi, Kenya, 1993-1998. Popul Stud. 2002; 56:311-23.

7. Ulin PR. African women and AIDS: negotiating behavioral. Soc Sci Med. 1992; 34:63-73

8. Carael M & Allen S. Women's vulnerability to HIV/STD in sub-Saharan Africa: an increasing evidence. In: Makinwa P, Jensen A, editors. Women's position and demographic change in sub-Saharan Africa. Leige:International Union for the Scientific Study of Population. 1995; Pg. 201-22.

9. Guidelines for the use of Antiretroviral Agents in HIV-1 Infected Adults and Adolescents. U.S. Department of Health and Human Services (DHHS). Adults and Adolescents Guidelines, 2011. Available from: http://www.aidsinfo. nih.gov/guidelines/Guideline Detail. Aspx?MenuItem=Guidelines&Search= Off&GuidelineID=7&ClassID=1 (accessed January 18,2012)

10. Keusch GT, Wilentz J & Kleinman A. Stigma and global health:developing a research agenda. Lancet. 2006; 367 : 525-7.

11. WHO HIV/AIDS treatment data (2006); Progress in scaling up access to HIV treatment in low income and middle income countries. Available from: www.who.int/hiv/toronto2006/fs_en.pd f).

12. Amusa YB, Adisa AO, Adediran IA & Durosimi MA, Otorhinolaryngologic associated features in HIV/AIDS patients in Ile-Ife,Nigeria. Nig. J of Clin Pract 2004; 7:69-73.

13. Taiwo OO, Okeke EN, Otoh EC & Danfillo IS. Prevalence of HIV related oral lesions in Nigerian Women. Niger.J. Med. 2005; 14:132-6

14. Akolo C, Ukoli CO, Ladep GN & Idoko J A. The Clinical features of HIV/AIDS at presentation at Jos University Teaching Hospital. Niger. J. Med. 2008; 17:83-7.

15. Letamo G. Prevalence of and factors associated with HIV/AIDS-related stigma and discriminatory attitudes in Botswana. J of Health Population Nutrition 2003;21: 347-357.

16. Singh, S and Samara R. Early marriages among women in developing countries. International Family Planning Perspective 1996; 22: 148-157.

17. Clark S. Early marriage and HIV risks in Sub Saharan Africa, Studies in Family Planning 2004; 35:149-160.

18. Human Right Watch 2004. Access to condoms and HIV/AIDS Information: A Global Health and Human Right Concern.

19. Udonwa NE, Ekpo M, Ekanem IA, Inem VA, Etokidem A. Oil doom and AIDS boom in the Niger Delta Region of Nigeria. Rural and Remote Health 2004;4: 273. Available: http://www.rrh.org.au

20. Brown L, Macintyre K & Trujillo L. Interventions to reduce HIV/AIDS stigma: what have we learned? AIDS education and Prevention 2003;15:49-69.

21. Swindells S, Mohr J & Justis JC, Berman S, Squier C, Wagener MM, Singh N. Quality of life in patients with HIV infection: impact of social support, coping style, and hopelessness. International J STD/AIDS 1999;10:383-391.

22. Kiertiburanakul S, Boonyarattaphun K, Atamasirikul S & Sungkanuparph S. Clinical presentation of newly diagnosed HIV infected patients at a University Hospital in Bangkok.Thailand. J. Int. Assoc. Physicians Aids Care 2008; 7: 82-7.

23. Aggarwal M & Rein J. Acute Immunodeficiency Virus syndrome in an Adolescent. Pediatrics 2003;113:e323

24. Bollinger RC, Brookmeyer RS, Mehendale SM, Paranjape RS, Shepherd ME, Gadkari DA. et. al. Risk factors and clinical presentation of acute primary HIV infection in India. JAMA 1997; 278:2085-9

25. Gimwade K, French N, Mbatha DD, Didicoat, M & Gilks, C F. HIV infection as a co-factor for severe Falciparium malaria in adults living in a region of unstable malaria transmission in South Africa. AIDS 2004;13:547-54

26. Al-Anazi AR. Gastrointestinal opportunistic infections in Human immunodeficiency Virus disease. Saudi J. Gastroenterol 2009;15:96-9.

27. De Angelis C, Mangone M, Bianchi M, Saracio G, Repici A& Rizzetto MR. An update on AIDS-related cholangiopathy. Minerva Gastroenterol Dietol 2009; 55:79-52.

28. Abasiubong F, Akpan N, Ukpong DI, Umanah I & Udoh SB. Quality of life in patients with skin diseases in Uyo,a community in South-South Nigeria. Advance Tropical Medicine and Public Health International 2011;1: 55 - 65.

29. Bebell LM, Pilcher CD, Dorsey G, Havlir D, Kamya M R& Busch, M P et al. Acute HIV-1 infection is highly prevalent in Uganda adults with suspected