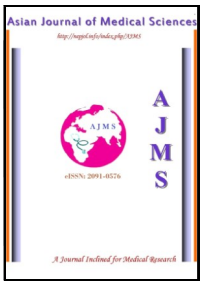
Asian Journal of Medical Sciences 1 (2010) 91-108

ASIAN JOURNAL OF MEDICAL SCIENCES

Conference Proceedings



International Conference on HIV-AIDS in Nepal-2010

3rd & 4th September, 2010

Organized by

Department of Microbiology

Manipal College of Medical Sciences,

Pokhara, Nepal

Organizing Committee

Chief Patron
Dr. B M Nagpal

Patron
Dr. P K Chakraborty

Organizing Chairperson
Dr. S Gokhale

Organizing Secretary
Dr. Jitendra Prasad Mathuria

Scientific Committee
Dr. N Suresh Baboo
Dr. A L Sharma
Dr. Alok Sinha
Dr. H K Tiwari
Dr. M T Ansari

Finance Committee
Mr. Sujivan Ghosh
Dr. Anirban Bagchi
Ms. Vijaya Banstola
Dr. Manu SS Rana
Dr. Tirthankar Ghosh

Reception Committee
Dr. Dayaram Pokharel
Dr. Prashant Agrawal
Mr. Sudesh Gyawali
Ms. Aparna Biswas

Treasurer
Dr. Abhishek Gaur

Media Committee
Dr. Asis De
Mr. Gaurav Yadav

Catering Committee
Dr. R R Sinha
Mr. Phanindra Poudel
Mr. Brijesh Sathian
Mr. Dharamraj Bhatta

Inauguration Committee
Ms. Chacchu Bhattarai
Ms. Asha lata

Advisors
Dr. V M Alurkar
Dr. J K De
Dr. R V R Rao
Dr. O P Talwar
Dr. K S Rao
Dr. S B Dixit
Dr. M L Panhani
Dr. Archana Saha
Ms. Sakun Singh

Transformative Social Protection for People Living with HIV/AIDS

Dr. N. Suresh Baboo

Chairman, Scientific Committee and, Professor of Physiology, MCOMS, Pokhara, Nepal

HIV/AIDS is not only a global health emergency but also a livelihoods crisis. In Nepal to Cambodia, Bangkok to South Korea, or even in USA, the struggling face of HIV/AIDS can be seen. It grimaces with a pang of fever and queasiness. It gasps with liquefied lung in hapless desperation. It wears massive, unhealed naked sores that floated up from the throat interiors and stretched unmasked over the cheeks, lips, neck, forehead and torso. In advanced stage of the disease, the nervous system deteriorates making the victims powerless even to close their eyes and mouth. AIDS results in severe cognitive deficits and it saps the body protein.[1] Draped in nothing but dry skin an 18 year-old suffering from end stage AIDS looks 60. This disease is so intimately embedded in human eco system that a full understanding of the HIV/AIDS requires the understanding of human eco system viz. natural environment and all dimensions of man made environments. By the constant shifting pattern of the human ecosystem by ever increasing and unplanned urbanization, growth of slums, industrialization, deforestation, land reclamation for housing activities, construction of dams and artificial water bodies significantly helped to acquire its current serious dimension and the rapid spread. So, HIV/AIDS presents new and diverse set of challenges for both the society and the providers of social protection. HIV/AIDS is both a cause and a consequence of vulnerability, ignorance and poverty that manifests itself very differently in different contexts. In the majority of developing countries the demographic, social and economic impacts of HIV/AIDS are very different than in developed ones. In most developing countries HIV/AIDS is largely confined to a few high-risk groups – sex workers, male homosexuals, drug users, prisoners, certain groups of migrants etc. These groups are typically located on the margins of society, carry high levels of stigma with associated taboos and are socially vulnerable. This statement is true for Nepal also.

Nepal's first cases of HIV/AIDS were reported in 1988, and the epidemic in Nepal is mostly driven by Injected Drug Users (IDUs), migrants, sex workers and their clients, and men who have sex with men (MSM). The government in 2007 estimated that approximately 70, 000 people are HIV -positive with an estimated prevalence of about 0.49% in the adults. As of June 2007, a total of 9756 cases of HIV, 1454 AIDS cases and 423 AIDS deaths had been reported to the National Centre for AIDS and STD control (NCASC). Nepal's 1.5 million to 2 million labour migrants make the most of Nepal's HIV-positive population.[2-4] According to United Nations General assembly Special Session (UNGASS) report on Nepal (2007), labour migrants make up 41 percent of the total known HIV infections in the country, followed by clients of sex workers (15.5 percent) and IDU's (10.2 percent). The following observations from various studies indicates the possibility of the growth of this pandemic in Nepal: AIDS prevalent among specific populations - migrants, sex workers and their customers, drug users and gay populations - can spread easily into larger populations as the Nepali women's leverage to negotiate safe sex with their partners is very less and the poverty and unemployment drives the spread by forcing young people into sex work. So the increase in the incidence of HIV in developing countries is principally due to the growth of population, poverty and prejudices. Therefore, currently Nepal is implementing the National HIV/AIDS Strategy 2006-2011 and the National Action Plan 2008-2011 to counter these factors.[1-3]

In a significant recent study conducted by the Bio-statistics Division of the Department of Community Medicine of MCOMS also confirmed the alarmingly increasing trend (Fig. 1) of HIV cases in Nepal.[4] The authors of this study has accurately estimated the cumulative number (Table-1) of HIV cases as 9614 up to 2007 that is just 142 cases lesser than that reported by NCASC. Like wise up to 2009 projected is 14833 which differs with actual reported cumulative number of HIV cases by 46 cases.[2-4] This result establishes the applicability of statistical modelling in predicting the number of cases of HIV so that the Nepalese agencies can be prepared for the future load.

Table -1: Observed[2,3] & estimated Cumulative[4] number of HIV cases

Up to Year	Cumulative number		Deviation
	Observed	Estimated	
2007	9756	9614	-142
2009	14879	14833	- 46

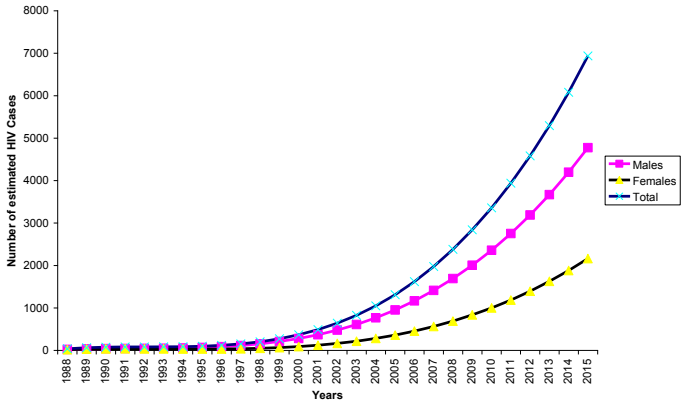


Fig-1: Year wise estimates of HIV cases

Currently the social response to HIV/AIDS in many regions is limited to 'harm reduction' projects (medical provisions, such as free drugs, syringes and needles, to prisoners and drug users). But, little strategic thinking has evolved about tackling HIV/AIDS in a broader livelihoods framework in developing countries.

Social protection must include all public and private initiatives that provide cash or consumption transfers to the needy, protect the vulnerable against livelihood risks, and enhance the social status and rights of the marginalized and initiatives to reduce the economic and social vulnerability of the vulnerable and marginalised groups.[5] So, the current social protection agenda to HIV/AIDS, at the domestic, national, and global levels needs revision in view of the vulnerabilities associated with HIV/AIDS that has implications for social protection plans. Perhaps most significant, at least from a livelihoods perspective, is its destructive impact on household earning capacity. By weakening and removing working adults, HIV/AIDS transforms 'providers' to 'dependents' and 'producers' into 'consumers' of household resources – which are already scarce in poor households where manual labour is one of their few assets. The following ten factors can interfere with the working of the traditional social protection plans leading to its inadequacy:

a) Fragmentation of households due to absorption of the affected into the orphanages, households of other relatives. b) Increased child labour to cope with higher resource requirements due to increase in non-productive household members. c) Wife and children inheritance for bereaved wives and children come along with associated harmful practices.

d) Increased involvement of women and young girls and boys in commercial sex to generate income for survival. e) Child-headed households results in the Loss of traditional social protection for children. f) Loss of family support for Elderly people due to loss of their adult sons and daughters. g) Increased risks of HIV infection due to adaptation of risky coping strategies (sex trade, bad company) for survival due to poverty. h) Rising rates of school drop-out/pull-out of Children, especially girls, to take on more responsibilities at home. j) Increasing early marriages of girls (to older men) to cope with poverty. These girls are vulnerable to forced sex trade. k) Increasing number of street children due to poverty find themselves in an environment that makes them susceptible to infection and criminality.[6,7]

Research on the social and economic aspects of AIDS while increasing, has consistently lagged behind medical, epidemiological and demographic research.[8] These initiatives are enormously important to the people they assist but does not recognise that entire livelihood systems which are being systematically undermined by the pandemic. A comprehensive social protection agenda should envisage interventions that will support livelihoods, protect and build assets, and minimise the risk of long-term dependence on external support. It is also important the social protection is not designed by outsiders on the basis of what they imagine is in the best interests of people living with AIDS (PLWA), but in a fully consultative process that prioritises the real needs of PLWA. It is too easy for well-meaning HIV/AIDS national programme or NGOs to decide that what PLWA really need is cash transfers, when PLWA themselves might instead see affordable access to ARVs as their most urgent need. This campaign can be characterised as a 'transformative social protection' measure.

Recommendations in relation to providing care for PLWA often refer to supporting and building on existing structures and 'indigenous' systems of care in the community. However, very little research has been done detailing "specific strategies and interventions that would make such an approach feasible and sustainable for institutions already facing increased stress and diminishing resources".[7] It is also vital that social protection initiatives for PLWA extend beyond HIV-positive persons to support their families and communities, especially women in affected households and community and health workers who may already be over-burdened. HIV/AIDS presents a new and diverse set of challenges for both formal and informal providers of social protection.[8]

A. Policy makers have consistently under-estimated the extent to which HIV/AIDS is a livelihoods crisis, requiring

support for household and community livelihood activities, but considered it only as a health crisis, requiring programmes for prevention, treatment and care. B. Since the social and economic impacts of HIV/AIDS vary across contexts and over time, social protection responses need to be tailored to locally relevant priorities and preferably identified by PLWA rather than by outsiders and modified as conditions change.

C. Currently there is disparity between individual, household, community and state level interventions. An integrated and comprehensive package is required that combines support to infected individuals and affected households with community-based and national initiatives. This should go beyond partial interventions and strategies and would provide "curative, preventive, promotive and transformative" social protection. What causes AIDS and what causes AIDS pandemic are two different intractable problems. Nonetheless, Nepal must begin an aggressive curative, preventive, promotive and transformative (food security, rural livelihoods, social protection and poverty reduction issues) campaign and must take steps to slow its spread as Botswana or Brazil has already done. National sex education campaign has nearly halved the prevalence of HIV among adults in Uganda. So, Nepal also can follow the path taken by Botswana and Uganda to curtail the prevalence of HIV. If the poverty and ignorance are removed more than half the battle will be won. The success of the prevention and cure of this dreaded disease in many developed countries is solely because of the absence of poverty and heightened awareness of HIV/AIDS.

The author acknowledges the profuse help obtained from various working papers by Stephen Devereux and Rachel Sabates-Wheeler, Development Economists and Research Fellows at Institute of Developmental Studies, Sussex (UK) who have immense Expertise in Sub Saharan Africa, Kenya, Lesotho, Malawi, Swaziland, Uganda, Zambia, Zimbabwe, Botswana, Ethiopia, Ghana, and Namibia (SD), Russia and the Commonwealth of Independent States, Sub Saharan Africa, Kenya, Mexico, Romania, Uganda, Albania (RSW). Both of them are working predominantly on food security, rural livelihoods, social protection and poverty reduction issues, studies that explore understandings of risk and vulnerability both conceptually and empirically among HIV/AIDS affected.

References:

1. Thapalia Bhuvan. Nip it early, (Post Platform): The Kathmandu Post, 20th May, 2010. pp 6
2. Annual Report. Department of Health Service, Ministry of Health and Population, Nepal, 2007; 179-83.
3. Fact Sheet: HIV and AIDS Epidemic Update of Nepal, National Center for AIDS and STD Control, Ministry of Health and Population, Nepal. 2009.
4. Brijesh S, Jayadevan S, Baboo NS, Suresh D, Abhilash ES, Aditya S. Statistical Modelling and Forecasting of Reported HIV Cases in Nepal. J Gandaki Med Coll, Nepal 2010; 3 (1) accepted for publication.
5. Stephen Devereux, Rachel Sabates-Wheeler. 'Transformative Social Protection', IDS Working Paper, 2004; 232. Brighton: Institute of Development Studies.
6. Stephen Devereux. The Social and Economic Impact of AIDS in East and Central Africa: A review of the literature, Oxford: Food Studies Group 1991.
7. Gillespie S, Kadiyala S. 'HIV/AIDS and Food and Nutrition Security: From Evidence to Action', Food Policy Review, 7, Washington, DC: IFPRI 2005.
8. Stephen Devereux, Rachel Sabates-Wheeler (IDS Sussex). AIDS, Vulnerability and Social Protection" Institute of Development Studies, Brighton 2005.

OP-1:

HIV/AIDS: Facts and Figures (A District Hospital based study)

Dr. Amitha J Lewis

Department of Oral Pathology and Microbiology, Manipal College of Dental Sciences, Mangalore, Manipal University, India

Objective: Acquired Immunodeficiency Syndrome (AIDS) is characterised by immunosuppression, which leads to a spectrum of clinical manifestations that include opportunistic infections, secondary neoplasms and neurologic manifestations. National AIDS Control Organization (NACO) estimates indicate that 37% of reported AIDS cases were diagnosed among people under 30. The male to female ratio in India is 1.7:1. The epidemiological features depend on the social and cultural practices of those people, which may again vary from region to region, and the clinical features and opportunistic infections of HIV infection may depend on the endemic malignancies and infections. The primary objective of this study was to document the epidemiological trends in relation to the clinico-pathological variations of HIV positive patients visiting a government hospital in Mangalore District, assess the associated morbidities & the oral manifestations and to correlate them with the CD4 counts.

Materials and methods: This cross-sectional retrospective study included cases confirmed of having HIV infection. Demographic details (age, gender, religion, socio-economic status, geographic region, possible mode of transmission, presenting clinical features/complaints, associated morbidities/oral manifestations and CD4 counts) are obtained from the case records.

Results: The data was processed and analysed with SPSS package 11.0. The demographic data are expressed in percentages.

Conclusion: The demographics of Mangalore District will be depicted in this study.

OP-2:

Blue Diamond Society for Human Rights, Social Rights and Advocacy Issues of the LGBTI & HIV/ AIDS affected

Sanjay Sharma

Federation of Sexual and Gender Minorities of Nepal (FSGMN)

Blue Diamond society was established in 2001 to work for the Human Rights, social rights and advocacy issues of the sexual and gender minorities and HIV/AIDS affected. Now there is the Federation of Sexual and Gender Minorities of Nepal (FSGMN) which is a network of 40 community based centres throughout Nepal. Sexual and gender minorities group (Lesbian, Gay, Bisexual, Transgender, Intersexual etc) are heavily vulnerable group socially and not getting minimum human respect. There are number of human rights violations against them from their own home, relatives, society, and even from the nation. They are facing stigma, discrimination everywhere. They are publically insulted by calling them as "Chhakka, Hijra, Mongia" by people. Even the learned members of the society (doctors, teachers, security personnel, etc) tease them about their gender and sexual behaviours. In the light of these social aberrations and vast number of human rights violations to LGBTI and people living with AIDS (PLWA) they must be empowered and sensitized about their rights but there are several obstacles to fight such problems. People of sexual and gender minorities are financially weak, less educated, and are banished from their family and society. There are no care and social support unit and hospice centre for the PLWA, men having sex with men (MSM), LGBTI etc. The general public and the society at large must understand the human rights of this marginalized group and do away with the discriminative mentality. Presently, the facilities are limited and only centralized to the cities of Terai region and not in the Hilly region. So, the program should be extended up to the hilly region too. Although the program is said to be 'Comprehensive HIV /AIDS and Human rights program', presently there is no support for the issues of human rights and transgenders in the national HIV/AIDS strategy.

Key words: Blue Diamond Society; Human Rights; Social Rights; Advocacy Issues; LGBTI; PLWA; MSM

OP-3:

Positive Prevention Program: Empowering People Living with HIV and AIDS (PLHA) in Nepal through their Meaningful Involvement (oral presentation)

Bhagawan Shrestha, Bhushan Shrestha and Prava Chhetri

Family Health International, Nepal

Objectives: The Positive Prevention (PP) program aims to reduce HIV transmission through providing needed services to PLHA, their families and increasing access to HIV prevention, care, support and treatment (CST)

services by PLHA in Nepal. Only about one-fifth of the estimated 70,000 PLHA in Nepal know their status in order to gain access to HIV prevention, CST services. Prevention strategies are generally directed towards HIV-negative people, thus often failing to address the distinct prevention needs of PLHA. This has created an urgent need to enable PLHA to start taking initiatives through PP activities to safeguard themselves and others, including prevention of new infections.

Materials and Methods: The US Agency for International Development (USAID) funded and FHI Nepal managed ASHA Project has been supporting eight PLHA-led community based organizations (CBOs) to implement PP activities in seven districts of Nepal since November 2007. The major PP program activities focus on education and counseling to adapt safer sex and injecting behaviors; promoting healthy lifestyles including condom promotion and distribution; counseling for sero-discordant and sero-concordant couples dealing with partner disclosure

Results: A total of 1,104 (578 male and 526 female) PLHA have been reached in the project districts in less than three years (November 2007 - June 2010). Following are some of the key results: PP program has been able to highlight the need and importance of prevention between PLHA and non PLHA and has helped discordant couples access HIV testing and counseling which has helped in understanding HIV and normalizing their strained relationships. There are anecdotal examples of increased self-esteem and improved health conditions among PLHA after they were served by the PP program. Capacity building of PLHA and involvement of PLHA themselves in PP program has contributed to reduction in HIV-related self-stigma and external S&D.

Conclusion: From the experience to date in Nepal, PP programs can be replicated and scaled-up by engaging local PLHA in their communities to meet the special needs of PLHA. Meaningful involvement of PLHA has strengthened the ownership of PP programs by PLHA leading to effective PP program implementation for and by PLHA. This has shown that PLHA can play an expanded and meaningful role upholding the principal of GIPA.

Key words: Positive prevention; PLHA, meaningful involvement; Nepal; HIV prevention, stigma and discrimination; disclosure

———————————————————————————

OP-4:

Feelings of Subjective Well-being in Women living with HIV/AIDS in Delhi, India

Sadhna Jain[1], Vinita Bhargava[2]

[1]Associate Professor, Aditi Mahavidyalaya, [2]Associate Professor, Dept (Human Development and Childhood Studies), lady Irwin College, University of Delhi, Delhi, India

Objectives: No society in the world is immune to HIV/ AIDS. India is facing accelerating threat from HIV/AIDS. It is not merely a health issue but a multifaceted one. The infection not only affects women's physical health but also affects them mentally. The present paper discusses the results of the study conducted by the authors to know the impact of HIV/AIDS on their sense of well-being, their understanding of the disease, community participation, patterns of care available to them and the constraints in the effective delivery of the services to them.

Material & Methods: "The Subjective Well Being Inventory" (SUBI) developed by Dr. H Sell and Dr. R Nagpal was administered on fifteen women living in families with HIV/AIDS in Delhi. It covers eleven positive and negative factors like general well-being, confidence in coping, perceived ill health, deficiency in social contacts etc related to feelings of subjective well-being in the individual. Besides this, interview guide, theme based discussions, narratives and observations were also used as tools for data collection.

Results: The results of SUBI showed that the scores of all the cases were below the mean value (90.8) of the test. Sixty nine percent of women scored in the range of 61-80. The minimum and maximum positive score of the sample was 27 and 44 respectively while that of test was 19 and 57. Eighty four percent of women scored below the mean positive score (42.9) of the test. The minimum and maximum negative scores of the sample was 37 and 60 respectively while that of test was 21 and 63 respectively. The factors of SUBI related to inadequate mental mastery, perceived ill health, deficiency in social contacts were most impacted while their scores were near middle value on factors related to general well- being, expectation achievement congruence, and confidence in coping, transcendence etc. The study also revealed that women with HIV were subjected to various forms of violence and discriminations. They remained providers and not receivers of health care. Most of the women were at mental discomfort but also reported increase in will

power to fight against the odds of life. The paper also discusses the role played by nongovernmental organizations in their lives. It also discusses the need for good counseling practices, strengthening of intra and interpersonal resources for coping and hence the development of feeling of subjective well-being in them. The results of SUBI may be used in assessing the coping potential of the women living with HIV/AIDS, to predict risk of breakdown and devising means to serve them in better way.

Key Words: HIV/AIDS; Women's; India

OP-5:

Attitude of Graduate Students towards HIV/ AIDS Infected People

Rachit Chawla[1], Brijesh Sathian[2], Vivek Kiyawat[1], Ashvita Garg[1]

[1]Final MBBS Students, [2]Asst. Professor, Department of Community Medicine, Manipal College of Medical Sciences, Pokhara, Nepal

Objective: AIDS related stigma refers to prejudice, discounting, discrediting, and discrimination directed at the people perceived to have AIDS or HIV and by the individuals, groups and communities with which they are associated. The objective of this study was to evaluate the attitude of graduate students towards HIV/AIDS infected people.

Material and Methods: It was a cross sectional study carried out at Delhi University Female Students. Assessment was made using questionnaire containing details of attitude towards HIV infected people. Descriptive statistics and testing of hypothesis were used for the analysis. Data analyzed using EPI INFO and SPSS 16 softwares.

Result: There was a relationship found between religion and their feeling towards people with AIDS ($p<0.001$) and level of persecution amongst people with AIDS over the years ($p<0.05$). 12% answered HIV can be transmitted by sharing a drink out of the same glass with someone who has the disease; 7% agreed and 59% disagreed strongly that people with AIDS should be legally separated from others to protect the public health; 79% strongly favor people at risk getting tested regularly for the AIDS virus; 51% felt a little afraid in meeting people with AIDS; 63% feel, a great deal of unfair persecution has been faced by people with AIDS; 52% felt uncomfortable about having their young child attending school where one of the students was known to have HIV infection; 60% felt comfortable with working in an office with a colleague who developed AIDS.

Conclusion: These findings have implications for those who are responsible for providing care to the increasing numbers of people with HIV/AIDS. Whether it is their religious beliefs, their educational level, or effect of both that has led to the positive attitudes of students towards people with HIV/AIDS. It will have a beneficial effect as they are the professionals of the future.

Key words: religious beliefs; people with HIV/AIDS

OP-6:

Assessment of the Hygiene Behaviour of Barbers Regarding HIV Transmission in the City of Bhopal

Vivek Kiyawat[1], Brijesh Sathian[2], Rachit Chawla[1], Ashvita Garg[1]

[1]Final MBBS Students, [2]Department of Community Medicine Manipal College of Medical Sciences, Pokhara, Nepal

Objective: A barber's profession is closely associated with the beliefs of an individual. The barber shop is a place where there is frequent use of the same blades, trimmers, combs, brushes and scissors, often with possibility of inadequate sterilization or disinfection. The use of sharp instruments may present HIV hazard as accidental scratching due to sharp instrument provides an opportunity for HIV to enter the body easily and cause serious health problems for the customers. HIV is sus-ceptible to heat and sunlight, and survival outside body is reported to be in seconds but it may be up to 10 to 15 minutes. The practices observed by barbers have been found to be favourable for transmission of HIV between customers. To assess the hygiene behaviour of barbers regarding HIV transmis-sion.

Material and Methods: It was a cross-sectional study carried out at Bhopal, India. Subjects were selected randomly. Assessment was made using structured interview with questionnaire containing details of type of saloons, use of same blade for more than one customer, disinfectant for washing equipment and socio-demographic details. Oral consent was taken before interviewing the participants. Descriptive statistics and testing of hypothesis were used for the analysis. Data analyzed using EPI INFO and SPSS 16 softwares.

Result: Out of 100 barbers, 66% were literate and 34% were illiterate. 46% were roadside barbers whereas 54% were working in big saloons. 22% were using same blade for more than one customer and 78% used fresh blade for every customer. 97% washed the equipment after using it on one customer. 78% used disinfectant to wash equipment. Literacy was 37% among roadside barbers and 91% among barbers working in big saloons. Mean age of participants is 31.01 with confidence interval (29.35, 32.67). There were relationships found between education, type of saloon and other factors viz. using same blade for more than one customer, use of disinfectant for washing equipment ($p< 0.001$). There were relationship between education and washing the equipment after using it on one customer ($p< 0.001$).

Conclusion: The risk is more with the roadside barbers as their practices are more unsafe. Illiteracy and economic factors play an important role. At present, cure to AIDS is a distant dream which leaves us with prevention as the only choice. Increasing awareness among people in general and particularly in people working in occupations at increased risk of transmission of HIV might help in reducing transmission. Barbers occupation is probably one such occupation and has scope for educational intervention. They should be educated about basic health precautions and principles that will be instrumental in prevention of this malady.

Key words: HIV/AIDS; Barbers

OP-7:

Importance of the Precautionary measures for Surgeons during the Operation of HIV Patients

Aditya sunka[1], Brijesh Sathian[2], Rashad Rahib[1]

[1]Final MBBS Students, [2]Asst. Professor, Department of Community Medicine, Manipal College of Medical Sciences, Pokhara, Nepal

According to WHO estimates, more than 70000 people in Nepal currently harbor the human immunodeficiency virus (HIV). As a result, many of these people may eventually develop acquired immunodeficiency syndrome (AIDS). In addition, some of these patients will also on occasion present to surgeons with accidents, emergencies and surgically correctable diseases. Surgeon's knowledge and attitudes regarding the care of patients with HIV are very important. Transmission of HIV is therefore always a potential danger during surgery. According to Palmer and Ricket, 1 in 1500 surgeons are likely to be infected with HIV because of damaged gloves. All patients are assumed to be infectious. It involves work practices which avoid direct contact with blood and all body fluids and guard against needle-stick injuries and exposures to mucous membranes. The infection control practices should include: Hand washing, appropriate use of personal protective equipment (PPE). PPE is including gloves, mask, eye goggles, face shield and gown. Use of disposables and proper cleaning, disinfection and sterilisation of patient care equipment, Proper housekeeping and management of spillage, Management of soiled/contaminated laundry, Disposal of sharps and infectious wastes. When performing surgery on patients with HIV one should take enough time during surgery, treat all organs with civility; try especially not to be impatient, try to minimize the amount of blood loss during the operation. The use of Indicator double gloves will reduce the risk of blood contamination among all surgeons for all types of gastrointestinal surgery. HIV testing should be mandatory for all the patients who are undergoing surgery, to take sufficient precautionary measures for surgeons.

OP-8:

Factors Associated With Consistent Condom Use with Clients Reported by Female Sex Workers in 22 Terai Highway Districts of Nepal

Laxmi Bilas Acharya, Tsering Pema Lama and Mahesh Shrestha

Family Health International, Nepal

Objective: Prevention programs targeted to female sex workers (FSWs) in Nepal are focused on increasing consistent condom use. Among FSWs, promotion of consistent condom use is a major program strategy to protect them from HIV and STI infection. The two main objectives of this study are as follows: 1) identify socio-demographic characteristics, HIV/AIDS related sexual practices, and other behavioral factors that determine consistent condom use among FSWs with their clients; and 2) identify behavioral/sexual practices that impede consistent condom use and its implications on future prevention programs.

Methods: This study analyzed the data from integrated biological and behavioral surveillance survey (IBBS) conducted in 2009 in 22 Terai highway districts of Nepal. Structured behavioral questionnaire was used to obtain information on the socio-demographic, sexual, and other risky behavioral factors. In this analysis "consistent condom use with clients in past 12 months" was chosen as the dependent variable. Significant association was measured by Chi-Square test. At the multivariate level, logistic regression model was fitted to measure the net effect of the predictor variables on the dichotomous dependent variables. Only those variables

significantly associated with the dependent variable ($p<0.05$) were included in the multivariate regression model.

Results: Consistent condom use with their clients was 70% among FSWs. The multivariate analysis showed that consistent condom use with clients in the past 12 months was significantly much higher among the newer FSWs with less than two years as sex workers (adjusted odds ratio: 2.27, 95% CI: 1.19 to 4.34) and among those who had a weekly income between NRs. 1000-2000 (adjusted odds ratio: 2.14, 95%CI: 1.30 to 3.53) and income greater than NRs. 2000 (adjusted OR: 2.15, 95%CI: 1.34 to 3.46). Furthermore, FSWs who usually carried condom were significantly more likely to consistently use condom with clients (adjusted OR: 2.84, 95%CI: 1.65 to 4.89). Compared to those FSWs who took more than 10 minutes to obtain a condom, the one who took 5-9 minutes (adjusted OR: 1.96, 95% CI: 1.17 to 3.28) and less than 5 minutes (adjusted OR: 1.96, 95% CI: 1.23 to 3.13) had a higher odds of consistent condom use with their clients.

Conclusion: Less than five minutes access time to condom has strong positive net effect. Older FSWs and those who earn less than 1000 NRs per month are significantly less likely to use condoms consistently. Increase the access time to condoms to less than 10 minutes and to encourage FSWs to always carry condoms by providing them with free condoms during visits by peer educators and community mobilizers. Efforts should be made to increase this behavior. Overall, programs targeting FSWs should put greater emphasis on improving quick access to condoms and increasing condom negotiation skills training.

Key words: Female sex workers (FSW); consistent condom use; Clients; Integrated Biological and Behavioral Surveillance (IBBS); confounding; odds ratio (OR); HIV/AIDS

———————————————————————————

OP-9:

Knowledge regarding HIV/AIDS among adolescents

Kshitiz Upadhyay-Dhungel[1] and Banodita Acharya Dhungel[2]

[1]Lecturer, Department of Physiology, [2]Lecturer, Department of Microbiology, KIST Medical College, Lalitpur, Nepal

Objective: HIV/AIDS is a global emergency. Nepal has moved from low prevalence status to concentrated epidemics with prevalence of 17.3% and 68% among female sex workers and intravenous drug users respectively. Nepal is confronted with increasing incidence of HIV among adolescents. There is need to ensure that young people who are at risk are to be reached with correct information and provide with appropriate skills and knowledge for HIV prevention. This study was carried out to assess the knowledge of adolescents regarding HIV/AIDS and to identify the areas of misconception that might serve as an important target for educational intervention.

Material and Methods: KIST Medical College organizes various health camps in community and hospital itself. It also organizes health assessment program for local school students. This study is a part of those health assessment programs. A self designed questionnaire regarding knowledge and perception about HIV/AIDS was distributed to the students of two secondary schools who attended the heath assessment program organized by Kist Medical College. The participants were from class 8-10. Written informed consent was obtained from the school authority and participating students. The data regarding the knowledge of HIV/AIDS were tabulated and analyzed.

Results: One hundred and seventeen participants filled and returned the questionnaire. Out of which, 74 (63%) were male and 43 (37%) were female (Response rate 98%). The mean age of the participants was 13.2 ± 2.2 years (range 11-17 years). Majority of the student-participants had a fair knowledge about HIV/AIDS. However, there were some areas of misconception especially about the mode of transmission of HIV. Sixty two percent of participants thought that the use of contraceptives can prevent HIV transmission and about 40% did not know that mosquito cannot transmit HIV. Forty-five percent of the participants thought that someone who looks healthy cannot transmit HIV. Similarly, 21% thought that sharing utensil, towel, toilet and swimming pool with HIV positive people can cause transmission of HIV.

Conclusions: Misconceptions can cause very serious problem especially in a scenario where lifestyle in Kathmandu valley is shifting from conservative to more free Western style. Such misunderstanding tends to produce prejudices against those having HIV/AIDS. Hence, the need of effective educational coverage to minimize new cases of HIV is essential.

Key words: AIDS; HIV; Knowledge; Youth

———————————————————————————

OP-10:

Sexual Behaviour and Condom use among Dalit Migrants of Far West, Nepal

R. Thapa[1], K. Bam[2]

[1]Sahara Paramarsha Kendra, Kathmandu, Nepal, [2]Himalayan Association Against STI-AIDS (HASTI-AIDS), Kathmandu, Nepal

Objectives: Migration has always facilitated the spread of any infectious disease. Around 41% of all HIV cases in Nepal are among seasonal labour migrants. Dalit Migrants represent the largest proportion (31%) of all HIV reported cases in Far West, Nepal. The General objective of the study was to explore the sexual behavior and practice of condom use among dalit migrants of Far West, Nepal. The specific objectives were to assess the sexual behaviour and condom use status among dalit migrants.

Material & Methods: The study was conducted among dalit male migrants in Feburary and April 2010. This study used multiple qualitative methods in data collection. It included 10 In-depth Interviews, 4 Focus Group Discussion and participant observation among dalit migrants with the age of above 15 years and who have migrated for at least 6 months. Purposively two VDCs from Achham and Kanchanpur were selected. The data was analyzed using domain analysis. Verbatim transcription was made when quotes are needed, and data from careful notes was put into a data master sheet for analysis and important verbatim during the process was also be analyzed. Taking informed consent the interview was recorded and those findings were kept confidential.

Results: The respondents described migration is very common among dalit community, which is fueling HIV epidemic in Nepal. High risk sexual behaviour was reported among younger dalit migrants, respondents who were unmarried, habit of drinking alcohol, and under peer influence. It was found that peer or relatives circle, alcohol drinking, cheaper sex; single life influenced them to engage in sexual behavior while in India Condom use was inconsistent due to their low perceived vulnerability to HIV and AIDS, alcohol habit and their belief that condom reduces sexual pleasure.

Conclusions: Migration among dalit community is high but the HIV and AIDS prevention programs for potential younger dalit migrants are rare. Programs aimed at promotion of safer sex practices through the condom, life skill training and utilization of sexual health services should target vulnerable migrant young people.

Keywords: Sexual Behaviour; Condom; Dalit Migrants; Far West Nepal

---

OP-11:

Building Molecular Diagnostic capacity in Nepal for HIV detection, monitoring and surveillance

Dibesh Karmacharya

International Director, The Center for Molecular Dynamics-Nepal, Kathmandu, NEPAL

The challenge of detection, surveillance and monitoring for infectious diseases like HIV in resource strapped countries like Nepal is exacerbated by lack of good molecular diagnostic and immunology laboratory. The Center for Molecular Dynamics Nepal, CMDN, has been working with its state of the art Molecular diagnostic laboratory (Intrepid Nepal) based in Kathmandu, Nepal to work on such areas as early and precise detection of HIV utilizing genomic based assays, post natal HIV screening, conducting molecular epidemiology to track movement of HIV within the country and developing RNA quantitation platform to do HIV viral load monitoring. This presentation is an effort to highlight some of the advantages and challenges of building molecular diagnostic laboratory in the developing world settings like Nepal and operating it in the context of addressing current and pressing challenges in healthcare in general and HIV epidemic in particular.

OP-12:

Sero-prevalence of Hepatitis B and C viral infections in HIV infected pediatric patients

V. L. Malhotra[1], A. Lakshmy[1], Meenakshi Nagarkar[2]

[1]Dept. of Microbiology, KSCH and LHMC, New Delhi, [2]Dept. of Pediatrics, AIIMS, New Delhi

Objective: An increase in the incidence of Hepatitis B and C co-infection in HIV infected children is a cause of significant concern. It has great bearing on outcome of these children as they are already on ART. It may have adverse effect on the treatment outcome. Keeping this in view, the present study was undertaken to find the sero-positivity rate of Hepatitis B and C in HIV infected children.

Methods: Blood samples were taken from one twenty eight suspected HIV infected pediatric patients aged between three and a half months to eleven years of age, attending the ART center of KSCH. Patients sera were tested for HBsAg and anti-HCV antibodies. HBsAg was

detected by HBsAg test, an Immuno-chromatographic assay (Beacon Diagnostics Pvt Ltd, Navsari, Kabilpore Gujarat). A one step cassette style anti-HCV test a double antigen sandwich immunoassay(IND Diagnostics, Canada), was done to detect the anti-HCV antibodies in the sera.

Results: In the present study, out of 128 infected children only HBsAg was positive in 8 (6.25%) children. None of the serum samples tested positive for anti HCV. antibodies. None of them had a history of blood transfusion.

Conclusion: The sero-prevalence of Hepatitis B co-infection among the HIV infected children was 6.25% in this study. The study highlights the importance of the management of pediatric HIV infected cases with related Hepatitis co-infection which adds to significant mortality and morbidity and should therefore be screened in all HIV positive children. Thus further management of these patients can be detailed. Anti HCV antibodies were not detected in any of the patients in the present study.

Key Words: Co-infection: HBsAg; anti-HCV antibodies; Immuno-chromatographic assay

---

OP-13:

Early Infant Diagnosis of HIV-1 in Resource Limited Settings Using Dried Blood Spots and Outsourcing HIV DNA PCR testing

Gopal Panta, Lisa Stevens, Durga Prasad Bhandari, Neeta Shrestha, Rabin Shresta, Kamala Moktan

Family Health International, Nepal

Objective: Children born of HIV infected pregnant women are HIV-exposed and at-risk for HIV acquisition. HIV antibody tests alone can not be used for diagnosis of HIV in children below 18 months of age. Due to the persistence of maternal antibodies for up to 18 months of age, it is impossible to distinguish antibodies made by the child in response to their own infection from those of their mothers. An HIV DNA PCR test is the gold standard for diagnosis of HIV below 18 months of age and is being used in many countries worldwide. HIV DNA PCR testing is not currently available in Nepal. The objective of this analysis is to assess the performance of Dried Blood Spot (DBS) specimens in making HIV diagnosis in children possible in the country by international outsourcing of HIV DNA PCR testing.

Materials and Methods: USAID supported FHI Nepal/ASHA Project developed a pilot program for Early Infant Diagnosis (EID) of HIV using the dried blood spot (DBS) technique and international send-out. It established EID services in five clinical sites caring for people living with HIV (PLHIV). Parents of HIV-exposed children between 6 weeks and 18 months old were offered infant specific pre-test counseling. Babies under 9 months received immediate DBS collection for HIV DNA PCR testing. Those between 9 and 18 months were initially screened by rapid tests, followed by DBS collection if the rapid tests tested positive. Staff provided cotrimoxazole prophylaxis, infant feeding counseling and ongoing clinical care to the exposed babies. DBS samples were sent to Bangkok for HIV DNA PCR testing. Families returned to the sites in one month for post-test counseling by which time the results of the tests from Bangkok had reached the sites. Those not returning were followed by community workers or NGO staff. Staff referred all positive children for immediate Antiretroviral Therapy (ART).

Results: Sites providing EID services encountered challenges related to limited geographic coverage and the issue of a month's lag time in receiving the results. Families often traveled long distances to access one of the five sites and they struggled to return for post-test counseling visits. Linkages and referral networks with other facilities and NGOs were essential to ensure follow-up. Appropriate infant-feeding of young HIV negative babies required provider's ongoing support. Initiation of ART and its continuation remained a challenge. This was tackled through community outreach and concerted counseling. At program initiation, laboratory personal were not able to collect the sample properly- some samples collected initially had an inadequate amount of blood. This was addressed by providing regular follow-up and mentoring. From January 2009 to June 2010, 76 babies were tested and received comprehensive services. 72 DBS samples were sent to FHI laboratory in Bangkok for HIV DNA PCR testing. FHI/ASHA Project received results from Bangkok within three weeks of shipment of the specimens and provided the results to the sample collection sites. Among the 72 DBS samples sent to Bangkok for HIV DNA PCR testing, ten were HIV DNA PCR positive.

Conclusion: After eighteen months of implementation, it is evident that EID services can be introduced and sustained in Nepal. FHI Nepal/ASHA Project has demonstrated that this can be done with success and results can be appropriately communicated to families so that necessary action can be taken to ensure survival of the exposed children. Linkages and referral networks among service providers, NGOs and other facilities should be strengthened to ensure appropriate feeding, ongoing

care, support and treatment of HIV exposed children. As Nepal is in the process of establishing in-country HIV DNA PCR testing services, the use of DBS technique should be considered as a very effective tool for transportation of blood samples from distant places of the country. Laboratory staff should be trained properly on collection of DBS samples from children before the expansion of in-country EID program. Other countries with few HIV-exposed infants should also consider this option. International outsourcing of HIV DNA PCR testing using DBS samples is effective and potentially life-saving.

Key words: Infant; Diagnosis; Dried Blood Spot (DBS); HIV DNA PCR

OP-14:

Assessment of Neutrophil Dysfunction and Morphological Alteration in HIV-Positive Patients with varying CD4 cell counts

Dr. Aashima Mohindra

Assistant Professor, Department of Oral Pathology and Microbiology, Manipal College of Dental Sciences, Mangalore, Manipal University, India

Objective: The clinical laboratory has played a vital role in monitoring the immunological status of patients infected with human immunodeficiency virus (HIV). Neutrophils serve as an important element in the first line of defense. Their functional impairment associated with HIV infection has been investigated in this study. The present study is an attempt to correlate the alteration in neutrophil function and morphology with the varying immune status of the HIV-positive individuals as indicated by their CD4 counts.

Materials and methods: Blood samples from 45 HIV cases and 15 normal controls were taken to assess the neutrophil function and size. CD4 counts were obtained from patient files. The HIV-infected patients were categorized into three groups on the bases of CD4 counts, according to the CDC classification as <200 (Group 1), 200 -499 (Group 2) and ≥ 500 cells/mm3 (Group 3).The phagocytic activity of the neutrophils was estimated using the phagocytic index that measured candidal ingestion by neutrophils. The neutrophil size was measured on Giemsa-stained blood smears using an eye-piece graticule, and the same smear was used for counting the number of lobes in the nucleus.

Results: The mean value obtained for neutrophil phagocytosis was 24.08 in Group 1, 28.73 in Group 2 and 44.67 in control group. The test showed significant results with an 'F' value as 457.128 and $p < 0.01$ (Sig). The phagocytic index was seen to decrease with the reduced CD4 counts. The neutrophil size showed a mean value of 14.208 µm in Group 1, 12.894 µm in Group 2 and 10.700 µm in the control group. ANOVA test showed 'F' value as 185.748 with $p < 0.01$ (Sig). This suggested that the neutrophil size showed a significant increase with decreasing CD4 counts. The mean values obtained for the number of lobes in neutrophils was 2.708 in Group 1, 3.130 in Group 2 and 3.475 in control group. The 'F' value deduced was 49.379 and p value was <0.01 (Sig). More number of lobes in the neutrophil nucleus was seen in patients having higher CD4 counts.

Conclusion: Changes in the neutrophil function and morphology signify viral induced alteration in the immune cells of the body.

Keywords: HIV; immunological status; CD4 counts; neutrophils phagocytic activity; neutrophil size; neutrophils lobes

---

OP-15:

Treatment of Visceral Leishmaniasis (Kala Azar) with Miltefosin in a patient with HIV Kala-azar co-infection at Patna, India

D. Tejaswi

Public Awareness for Healthful Approach for Living (PAHAL) HIV AIDS, Patna, India

Objective: Although India contributes heavily to the global HIV and VL (Visceral Leishmaniasis or Kala-azar) co-infection, information about treatment of Kala azar with the relatively newer drug Miltefosin in India is sparse. This case study is documented and presented due to the effectiveness and ease in the treatment and home based management of VL with HIV with Miltefosin compared to Amphotericin B and other drugs which needs costly hospitalized care.

Methods: Case Study: 30 Year old HIV positive patient with CD4 165, HIV I Viral Load > 7,50,000 ; WBC 8000/cubic mm, ESR 78 mm/hr, SGPT 35, S.Creatinine 1.1, Hb% 78%,HbsAg Negative, reported on 14.8.2009. He had huge splenomegaly but on splenic puncture examination LD bodies were found negative. He was on ATT since past 4 months. We started HAART (Tenofovir 300 mg + Emtricitabine 200 + Efavirenz 600 mg once daily regimen) on 31st of August 09. At that time he had ocassional history of fever with rigor. In the third

week of September 09 he developed high persisting fever with rigor. On 10th October 09, again the LD bodies were negative but aldehyde test came positive. ELISA test IgM for Kala-azar was indeterminate. We started empirical Miltefosin 50 mg tab twice daily after food for 28 days from 11th of October 09 with a very close follow-up instruction.

Results: Patient became afebrile after 20 days of treatment and spleen size also reduced to its normal by the end of November 2009. During the treatment he had no significant side effect. Patient is still doing fine with all improved parameters.

Conclusions: VL co-infection with HIV can be effectively treated in home based care settings with Miltefosin oral tablet with very few side effects compared to Amphotericin B that needs costly hospitalization.

Key words: Visceral Leishmaniasis; Miltefosin; Home Based Management; Hospitalized Care; LD Bodies

---

OP-16:

Significance of ART in controlling Opportunistic infections in HIV

Rashad Rahib[1], Brijesh Sathian[2], Aditya sunka[1]

[1]Final MBBS Students, [2]Asst. Professor, Department of Community Medicine, Manipal College of Medical Sciences, Pokhara, Nepal

People who are affected with advanced HIV are vulnerable to opportunistic infections (OIs) as they take advantage of the opportunity offered by a weakened immune system. Since the beginning of the HIV epidemic, OIs have been recognized as common complications of HIV infections. OIs causes substantial morbidity necessitate toxic and expensive therapies and shorten the survival of people with HIV infection. A decreased CD4+ count is responsible for the profound immunodeficiency that leads to various OIs in HIV infected persons. Before the widespread use of potent combination antiretroviral therapy (ART), opportunistic infections OIs were the principal cause of morbidity and mortality in this population. In the early 1990s, the use of chemoprophylaxis, immunization, and better strategies for managing acute OIs contributed to improved quality of life and improved survival. However, the widespread use of ART starting in the mid-1990s has had the most profound influence on reducing OI-related mortality in HIV-infected persons in those countries in which these therapies are accessible and affordable. The initiation of ART in the setting of an acute OI also has preventive benefit; a second OI is less likely to occur if ART is started promptly rather than delaying the initiation of ART. Nepal government and Health ministry has to gear up the new strategies for controlling the HIV Opportunistic infections by 2015. It will require expansion of targeted interventions, strengthening of the health system at large, improving partnerships with the private sector and civil society, and the backing of these activities with sufficient and sustained funding.

OP-17:

ASHA's Experience with Post-Exposure Prophylaxis in Out-patient Clinic Settings

Rabin Shresta, Durga Prasad Bhandari, Gopal Panta, Lisa Stevens, Neeta Shrestha, Kamala Moktan

Family Health International, Nepal

Objective: Health-care personnel are exposed to the risk of HIV infection while providing clinical and laboratory services to people knowingly or unknowingly living with HIV. While taking universal precautions during the delivery of the services is of the utmost importance, the availability of a plan that becomes activated in an event of an exposure is equally important to protect the health-care workers.

Methods: The plan should have a well defined procedure describing steps to be followed after an exposure, training of concerned health-care personnel on the procedure and a logistics system of accessing Post-Exposure Prophylaxis (PEP) drugs. USAID supported ASHA Project developed a PEP flow chart that supports a trained person to assess a risk of an exposure and decide whether PEP drugs need to be prescribed. It also describes a process of accessing the drugs quickly. ASHA Project trained clinical and laboratory personnel of its NGO partners and had the partners stick the charts in their clinics and laboratories. It provided each of the sites with PEP starter packs. Starter packs are repackaged PEP drugs adequate for five days and three days. Five-day-starter packs were given to static sites and three-day-starter packs were given for teams that went on mobile or satellite clinics. The idea of starter packs was to have the PEP drugs available within hours or minutes of their demand. This is cheaper than having full doses at the sites. For the full doses a focal person appointed for a site would contact a focal person at ASHA office in Kathmandu. Each site appointed two focal persons who, in addition to coordinating for full doses, were responsible for proper storage and monitoring of expiry dates of the drugs. They were also responsible for preparing new starter packs from the full dose supplied by ASHA office.

Results: Since the beginning of the system in 2006 there have been fourteen cases of exposure. In eleven of the cases, PEP was begun on the same day. In the remaining three cases PEP was begun on the next day. In two of the eleven cases, PEP was begun within an hour. All the cases tested negative at the initial. Ten of the cases tested negative after six months. In one case, the exposed person tested negative after six weeks, but was lost to follow-up after that. There was one more case that was lost to follow-up. In another case, doctors decided to discontinue PEP drugs as they perceived no risk later on. The basis of decision was that source client tested negative and sat in a post test counseling before the doctors decided it. In the third case, six-month-period will reach only in Sep 2010. The case tested negative in three months. The results show that having starter packs does help protect an exposed person. During the exposure cases it was felt that having at least two full doses at ASHA was helpful when the NCASC central store, from where AHSA access full doses, remained close during public holidays. In cases where sites are closer together, having starter packs would suffice and decreased the cost of inventory. In fact the sites could not only provide PEP drugs for its staff, but could also become sources of PEP drugs for other organizations like those providing CHBC services.

Conclusion: The NCASC has begun to implement the use of starter packs. The PEP flow chart developed by ASHA has already been endorsed by the government and is being used in ART centers around the country. Another step forward is to have the sites access full doses from the near by ART sites so that the cost of distribution from ASHA office is not incurred and with a better coordination with the ART sites, starter packs at the sites nearing expiry can be exchanged with the ones with longer shelf lives, nullifying the waste due to expiry.

Key words: ASHA Project; PEP; exposure; starter pack

OP-18:

Drug Susceptibility Profile of *Mycobacterium tuberculosis* isolated from HIV-sero-positive and sero-negative Patients in North India

J P Mathuria[1& 2], S. Anupurba[1]

[1]Department of Microbiology, Institute of Medical Science, Banaras Hindu University, Varanasi, India, [2]Department of MicrobiologyManipal College of Medical Sciences, Pokhara, Nepal

Objective: Tuberculosis (TB) is one of the commonest opportunistic infections in human immunodeficiency virus (HIV) infected patients in Africa and Asia. HIV is the strongest known risk factor for the development of TB. Researchers have shown that India has the second highest number of MDR-TB cases in the world (238 806 cases per year). WHO reports also says that, global drug resistance is an increasing concern. Keeping in mind the above facts we conducted the study to know the drug susceptibility patterns of Mycobacterium tuberculosis isolated from HIV sero-positive patients and sero-negative patients in North India.

Methods: Ninety eight M. tuberculosis isolates (69 from HIV-seronegative and 29 from HIV-seropositive patients with no previous history of anti-tuberculosis treatment) were subjected for drug susceptibility testing by proportion method for four first line anti tubercular drugs (isoniazid, rifampicin, streptomycin and ethambutol). These M. tuberculosis isolates were isolated from the patients attending outpatient department (OPD) of TB & respiratory diseases and Anti Retroviral Therapy (ART) centre of Sir Sunder Lal hospital and Integrated Counseling and Testing Centre (ICTC) of Department of Microbiology, Institute of Medical Sciences, Banaras Hindu University, Varanasi, India.

Results: Drug susceptibility testing results showed that, MDR cases were found higher in HIV-seropositive (n=5, 17.2%) in comparison to HIV-sero-negative (n=8, 11.6%) patients. The resistance to Isoniazid was found to be similar in both type of patients, but it was higher for Rifampicin in HIV-seropositive patients.

Conclusions: In our study we could not found any significant difference in drug resistance profile of *Mycobacterium tuberculosis*, among HIV-seropositive and HIV-seronegative patients. Since this study focused only on a small set of samples that was probably less than representative, it is difficult to draw any concrete conclusions on association of drug resistance and HIV seropositivity in tuberculosis infected patients to all first-line anti-tuberculosis drugs.

Key words: Tuberculosis; HIV; Drug resistance; MDR; India

OP-19:

Acquaintance of CNS as Anatomical Reservoir of HIV-1 and Antiretroviral Therapy

Jenny Chacko[1], Brijesh Sathian[2], Rashad Rahib[3], Aditya Sunka[3], Teresa Joy[1]

[1]Lecturer, Anatomy Department, [2]Community Medicine, [3]Final Year MBBS Student, Manipal College of Medical Sciences, Pokhara, Nepal

The Central Nervous System (CNS) is receiving great attention as an anatomical HIV reservoir in both therapy experienced and therapy-naïve patients. The two formidable barriers (Blood Brain/CSF barriers), give rise to an altered immunological environment and provide an obstacle to therapeutic measures such as Antiretroviral therapy and thus the CNS becomes a unique site for HIV replication. Pathologic studies suggest that microglia are the primary CNS sites of HIV infection. Recently, HIV DNA has been detected in cortical and basal ganglia-derived astrocytes, indicating it as a viral reservoir in the brain. The CSF serves as an independent compartment for viral replication. In fact, studies show the incidence of HIV infection in Choroid plexus exceeds that of the brain and occurs prior to the onset of AIDS and immune suppression. In the absence of adequate CNS penetration by drugs in a potent antiretroviral therapy regimen, the CNS could constitute a site in which ongoing viral replication may occur. Potentially of even greater concern, is that virus clones bearing mutations may come to predominate in the presence of 'suboptimal drug levels'. Although protease inhibitors would be expected to have difficulty in penetrating the blood-brain barrier, it has been determined that some drugs of this class, such as Indinavir, achieve CSF levels comparable to rough plasma values. Inadequate drug penetration into CNS is of utmost concern firstly CNS may form a drug free zone for HIV and secondly, because the suboptimal concentration of drugs in this compartment favours the emergence of drug resistance.

Key words: CNS; HIV infection; drug free zone

OP-20:

Side Effects Associated with Antiretroviral Therapy

Shyam P. Lohani[1], Deepak K. Karki[2]

[1]Nepal Drug and Poison Information Center, Shamakhushi, Kathmandu and [2]National Centre for AIDS and STD Control, Kathmandu

Objective: Antiretroviral drugs are medications used for the treatment of HIV infection. Typically three or four drugs in combination are given to eligible candidate and are popularly known as highly active antiretroviral therapy (HAART). Ministry of Health, Nepal developed antiretroviral therapy (ART) guidelines and launched ART therapy from February 2004. There are 25 ART sites and 10 sub-sites in Nepal where 4,509 patients are on treatment as of July 2010. The objective of the study was to analyze side effects associated with ART therapy.

Methods: A retrospective analysis of all queries related to ART side effects to a Nepal Drug and Poison Information Center (NDPIC) from June 2006 to July 2010 was done.

Results: A total of 47 consecutive cases were reported to NDPIC. 72% of cases were males (n=34) and remaining were female (28%, n=13). Ages ranged from 22 to 55 years, mean 31 years (± 8.05). Combinations of fatigue, nausea vomiting, headache, dry mouth, diarrhea, dizziness, skin rashes, confusion, fever, migraine, mood swing, insomnia, loss of appetite, sleeping disorders, and nightmares were initial presenting symptoms. Time to onset of side effects ranged from 30 minutes to 12 hours after taking antiretroviral drugs. Treatment was symptomatic and supportive. In all cases, full recovery occurred and patients were continued of ART therapy.

Conclusion: Patients who are on ART therapy develops side effects which can be resolved with supportive and symptomatic treatment. The ART centers are recommended to start ART drug counseling on side effects of the therapy.

Key words: Antiretroviral drugs; HIV/AIDS; side effects; Nepal Drug and Poison Information Center (NDPIC)

OP-21:

Assessment of the Treatment outcomes among the clients on Anti Retroviral Therapy in Kathmandu valley, Nepal

R Thapa[1], K Bam[1], D K Karki[2], K K Rai[2], U R Aryal[3]

[1]Nobel College, Department of Public Health, Pokhara University, Kathmandu, Nepal, [2]National Centre for AIDS and STD Control, Kathmandu, Nepal, [3]Kathmandu Medical College, Kathmandu University, Kathmandu, Nepal

Objective: The objective of the study was to assess the Anti Retroviral Therapy (ART) outcomes by cohort analysis at 6, 12 and 24 months and to determine the factors

associated with the treatment outcomes. Though ART was started in early 2005 but cohort analysis has not incorporated as a regular program in Nepal.

Materials and Methods: A total of 1431 people who completed at least 6 months of treatment were enrolled in the ART from January, 2005 to December, 2008 from 5 ART sites in Kathmandu were taken as study population. The entire patient records were recorded in the data record sheet prepared based on ART and Pre ART forms of WHO. The data analysis was done by using a descriptive statistical analysis. In order to determine the relationship between independent and dependent variables, the Odds ratio and Chi-square test was used.

Results: Survival rate of client on ART for 1 year was 73 % with death rate 11 %. 16 % of clients were lost to follow-up. About one third of the clients are not receiving ART after one year either due to death or lost to follow-up. Better retention of clients for 6 and 12 months was significantly associated with clients on NGO run facility (OR: 8.98, 3.89-20.57), CD4 more than 200 mm3 during enrolment (OR: 1.56, 1.23-1.97), weight more than 48kgs during enrolment (OR: 1.38, 1.08-1.76). WHO stage IV (OR: 0.53, 0.38-0.72) and presence of TB during ART (OR: 0.68, 0.53-0.86) were the significant predictors of treatment discontinuation ether due to death or lost to follow - up.

Conclusions: The results support the notion that evaluations of the scale-up of ART in resource-limited settings should consider not only the number of new patients starting ART but also the number remaining in long-term care. Better ART outcomes, including higher retention rates, were obtained in services that had smaller numbers of clients.

Keywords: Treatment Outcomes; ART; Kathmandu; Nepal

OP-22:

Practical Issues of Dealing with the HIV Data and Statistical Modeling in Nepal

Sathian B[1], Sreedharan J[2], Kumaran M[3], Baboo N S[4], Vivek K[5], Rachit C[5]

[1]Department of Community Medicine, [4]Department of Physiology, [5]Final Year MBBS Student, Manipal College of Medical Sciences, Pokhara, Nepal, [2]Gulf Medical University, Ajman, United Arab Emirates, [3]Nehru College, Kanhangad, Kerala, India.

The current situation of HIV in Nepal is different from that when the first case was diagnosed in 1988. Till date (2009) total positive cases reported are 14787 out of which 13005 are receiving HIV care. HIV/AIDS surveillance methods evolve over time, so data from the same source may not be directly comparable time to time. Much of the global data are estimates only. Attention to ranges must be given around any estimate, as well as any notes that may accompany data, since these may provide important information that can help in the interpretation. In 2001, the UNAIDS/WHO introduced a new version of its epidemiological model as Estimation and Projection Package (EPP) for all developing countries for the surveillance data from each HIV sentinel site to estimating HIV/ AIDS prevalence rates and other details. The Spectrum Program of UNAIDS and WHO makes use of vital rates which were obtained from a poor vital registration system. Given the observed limitations in the current estimation procedures in Nepal, it is better to examine other modelling approaches for HIV/AIDS epidemic that could be more suitable and give more accurate estimates for the Nepal epidemic scenario. Modelling and Extrapolation can be done with a graphical representation of the collected data (independent and dependent variables) involved in a study. The association between these variables is then assessed by connecting the `points' with a line. Though very true, this association cannot be relied upon to predict the future trend of this data. Now a `model', which `fits best' to the observed data has to be worked out. This is then `fitted' and used to replace the existing set of data points as `the appropriate model'. After `modelling' the observed data, this model can be used to predict future trend of the dependent variable for a given change in the other. A usable and understandable curve-fitting method is to be made available from which the model facts that are reflective of future behaviour can be obtained. The present study describes different forecasting methods for HIV data and how such estimates are interpreted for the benefit of exploring possible improvements in policy making.

Key words: Estimation and Projection Package; Modelling and Extrapolation

---

OP-23:

HIV Prevalence among Injecting Drug Users in Nepal: A Systematic Review of 15 Behavioural Surveys

Deepak Kumar Karki[1], Keshab Deuba[2], Umesh Raj Aryal[3], Krishna Kumar Rai[1]

[1]National Centre for AIDS and STD Control, Teku, Kathmandu, [2]Nobel College, Pokhara University, Kathmandu and [3]Kathmandu Medical College, Kathmandu University, Kathmandu

Objective: We conducted systematic review and Meta analysis of 15 behavioural surveys to calculate a pooled HIV prevalence and pooled needle/syringe sharing prevalence among injecting drug users (IDUs) in Nepal.

Material & Methods: We reviewed surveys conducted from 1999 to 2009 among IDUs to assess HIV prevalence as a primary outcome in the study. HIV prevalence, proportion of needle/syringe used that has been used by other in last week and total sample size was extracted from each of the survey reports that satisfied inclusion criteria for analysis. We used DerSimonian-Liard random-effects method to calculate pooled HIV and needle sharing behaviour prevalence among IDUs. The I2 index was calculated to identify overall variation in prevalence that results from between-surveys heterogeneity. Two forest plots were drawn for HIV prevalence, used a needle/syringe that had been used by other in last week and its 95% confidence intervals (CI) and the overall DerSimonian-Liard pooled estimate.

Results: The 15 behavioural surveys were conducted in Kathmandu Valley, Pokhara Valley and 22 Terai highway districts includes east, west and far-west districts. The pooled HIV prevalence among IDUs was 19.4 (95% CI: 12.8, 28.3). The I2 value was medium for between-survey heterogeneity (i.e I2= 49.4%). The pooled needle/sharing behaviour in last week prevalence was 18.7 (95% CI: 12.2, 27.5).

Conclusion: HIV prevalence amongst IDUs is the highest among all high risk groups across Nepal transmitting HIV infection to partners (needle sharing and sexual partners). Improving the coverage of the effective harm reduction measures such as provision of safe needle/syringe and enrollment into oral substitution therapy, including reducing vulnerabilities among IDUs is urgently required to decrease the risk of HIV transmission.

Key words: HIV; Prevalence; IDU; Nepal/epidemiology; Meta-analysis; Nepal

———————————————————————————

OP-24:

HIV Prevalence among Female Sex Workers in Nepal: A systematic Review and Meta Analysis of Behavioural Surveys, 1999-2009

Keshab Deuba[1], Deepak Kumar Karki[2], Rachana Shrestha[1], Umesh Raj Aryal[3], Krishna Kumar Rai[2]

[1]Nobel College, Pokhara University, Kathmandu, [2]National Centre for AIDS and STD Control, Teku, Kathmandu and [3]Kathmandu Medical College, Kathmandu University, Kathmandu

Objective: The objective of the study was to conduct systematic review and Meta analysis of behavioural surveys assessing HIV prevalence among female sex workers (FSWs), calculating a pooled HIV prevalence and summarizing pooled consistent condom use prevalence.

Material & Methods: Surveys conducted from 1999 to 2009 among female sex workers assessing HIV prevalence as a primary outcome was included in the study for the review. HIV prevalence, consistent condom use with the clients in the last 12 months and total sample size was extracted from each of the survey reports that satisfied inclusion criteria. To calculate pooled HIV prevalence and consistent condom use prevalence, we used DerSimonian-Liard random-effects method. The I2 index was calculated to identify overall variation in prevalence that resulted from between-surveys heterogeneity (e.g. respondent driven sampling to cluster sampling). Surveys bias was examined through the funnel plot. Two forest plots were drawn and sorted according to study year to measure HIV prevalence and consistent condom use. The results were presented with 95% confidence intervals (CI) and the overall DerSimonian-Liard pooled estimate.

Results: A total of sixteen surveys conducted in different geographical locations (e.g. Kathmandu, Pokhara and 22 Terai highways districts includes east and west highway districts) were identified for HIV prevalence. Among them seven surveys were excluded for the condom use proportion due to their incomparable results. The pooled HIV prevalence among FSW was 2.7 (95% CI: 1.6, 4.6). The between-survey heterogeneity was medium (i. e. I2= 48.1%). The pooled consistent condom use prevalence was 42.9 (95% CI: 31.6, 55.0).

Conclusion: HIV prevalence among FSWs is still high to transmit the infection to clients and through them to general low risk female populations. Comprehensive condom programming among FSWs focused in targeted behavioural change interventions like consistent condom use is to be strengthened to reduce HIV risk.

Key words: HIV, Prevalence; Female; Prostitution; Nepal/epidemiology; Meta-analysis

———————————————————————————-

PP-1:

HIV Sero-prevalence in Injecting Drug Users (IDUs)

Amit Dhungel and Roshan Adhikari

Naulo Ghumti, Nepal

Objective: The objective of this study is to estimate HIV positivity among Injecting Drug Users (IDUs) in Nepal. Naulo Ghumti has been providing Voluntary Counseling and Blood Testing (VCT) services to IDUs since October 1 2006. This service aims to reduce the risk behavior of the IDUs.

Methods: Naulo Ghumti Nepal has been using a MS Access based software program to input the data of its clients who receive VCT Services. Secondary data from the period of October 1, 2006 till July 2010 was collected and analyzed through the Microsoft Access Software. Rapid Testing method was conducted for the HIV Blood testing of IDUs, which includes three tests viz. Determine test as the preliminary test, Uni Gold as second test and SD Bioline as a confirmatory test.

Results: The study shows that a total of 1491 (35 Females) Injecting Drug Users tested their Blood for HIV from October 2006 to July 2010. During October –Dec 2006 3 Male IDUs were found positive for HIV out of 87 (2 females) IDUs In the year 2007, 28 (26 Male and 2 Female) were found positive out of 476 IDUs (467 Male, 9 Female). In the year 2008, 9 males out of 554 IDUs (Male 539, Female 15) were positive In the year 2009, 9 male were positive out of 416 IDUs (Male 409, Female 7) tested for HIV. In this year (till July 2010), 7 males were positive for HIV out of a total of 313 (Male 309, Female 4) IDUs.

Conclusion: During the period of October 2006 to July 2010, the total number of IDUs diagnosed with HIV was 56 including 2 Females, with the positivity rate of 3.75 percent. This rate is comparatively low in Male IDUs with 3.7 percent than 5.71 percent in female IDUs.

Key words: Injecting Drug Users; Naulo Ghumti Nepal; Voluntary Counseling and Testing

Dr. Jitendra Prasad Mathuria

Organizing Secretary

International Conference on HIV/AIDS in Nepal-2010

Department of Microbiology

Manipal College of Medical Sciences

Pokhara, Nepal.

E-mail: jitesh141@gmail.com