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FACULTY OF MEDICINE
MAKERERE UNIVERSITY

ATIC newsletter

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INFECTIOUS DISEASES INSTITUTE

Quarterly Newsletter of the AIDS Treatment Information Centre, Infectious Diseases Institute Ltd, Makerere University, Kampala

Integrating Family Planning into HIV/AIDS Treatment Services at

The Infectious Diseases Institute Limited.

By Dr Fred Ssewankambo, SRH Coordinator

The Infectious Diseases Institute Ltd (IDIL) is a Uganda-registered NGO, located in Kampala and owned by Makerere University under the College of Health Sciences.

IDIL's mission is:

To build capacity of health systems in Africa for the delivery of sustainable, high quality care and prevention of HIV/AIDS and related infectious diseases through training, research, and advanced clinical services.

The Prevention, Care and Treatment (PCT) program at IDIL is one of the sites accredited by the Ministry of Health of Uganda for the delivery of HIV care including ART. Approximately 350 clients (friends) are seen daily. About 66% of the clients are female and over 1,500 women < 30 years are in active care.

When the "rollout" of ARV drugs started , IDIL focused on delivering antiretroviral therapy (ART) (and treating the complications of HIV) to as many eligible people as possible. This focused response led to marked reductions in mortality and improvement in the quality of life.

This achievement was without inclusion of the Sexual Reproductive Health (SRH) of persons-living-with HIV/AIDS (PLHAs). Overtime IDIL clinicians began to note an increasing number of pregnancies, often unplanned, among their clients.

To assess the unmet SRH needs, IDIL carried out a survey that documented the extent and scope of the gaps in the area of SRH. The findings of the survey were:

- Two out of three women interviewed reported sexual intercourse in the week prior to the survey
- About 69% of the women did not use condoms consistently.

IDI Clinic staff attending training

- Only 52% knew that their main sexual partner had been tested for HIV.
- 16% were pregnant on the day of the survey, and over half of these had not registered for antenatal care.
- 78% reported utilization of FP services before HIV diagnosis but after the diagnosis the use of FP services dropped to 40%.
- 30% had experienced pregnancy after their HIV diagnosis and 66% of these pregnancies were unintended.

The findings from this survey led IDIL to seek funding opportunities to narrow these gaps. There was therefore, considerable opportunity to build an integrated SRH program at IDIL through multiple funding streams since some components of SRH at IDIL had been funded through other partners.

In September 2008, IDIL received a grant from TIDES Africa Fund to integrate family planning into HIV treatment services at its clinic and to highlight the integrated service model in HIV clinical training courses offered at the Institute.

The overall aim was to reduce the rate of un-intended pregnancies among HIV-infected women in the reproductive age bracket in Uganda. The project sought to contribute towards the overall wellbeing of women who are living with HIV through increased access to informed reproductive health choices.

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INSIDE stories

EDITORIAL

Sexual Reproductive Health (SRH) is now increasingly being recognised as important both to human wellbeing and poverty eradication.

SRH is a largely invisible burden in many countries. It accounts for a high proportion of the global burden of ill health, particularly for women in the reproductive age group.

In Sub Saharan Africa, where the AIDS epidemic is widespread, about 63% of women have an unmet need for effective contraception and, consequently, a high proportion of unintended pregnancies. Many of these women do not know their HIV status, have limited access to information and services, and thus risk passing the virus to their children.

Integrating sexual reproductive health into HIV/AIDS care & treatment services is of paramount importance.

Intergration of SRH services with HIV/AIDS interventions should strengthen both services. This is true because both services face the same health system challenges i.e. shortage of trained staff, essential supplies and equipment, adequate facilities, and management skills. These services also face a similar obstacle in dealing with sensitive or taboo subjects in the communities.

Under these circumstances, access to even a minimal integrated package of care; including family planning, management of sexually transmitted infections, HIV prevention & maternal health, will enable women to protect themselves from unintended pregnancies and HIV. Thus also prevent HIV transmission to their children.

The objectives of the grant/project were;

1. To integrate Family Planning (FP) into the SRH activities at IDIL
2. To reduce the incidence of un-intended pregnancies from the current 60% to less than 20% among women in the reproductive age bracket attending the clinic
3. To evaluate the effectiveness of the national curriculum for FP within an HIV positive population

The main objectives of this project were to establish a high-quality FP service (as part of a comprehensive SRH package) that is fully integrated into the HIV program at IDIL, and to modify the existing FP/HIV training curricular based on the project experience.

The following activities have been carried out to achieve the first objective of the project:

- Formation of the Sexual Reproductive Health Steering and Management Committees.
- Identification of PCT Programme Staff to Participate in Direct implementation of Integrated FP/HIV Services as the allocation of project space within the institute.
- Development and adoption of an integrated FP/HIV training curriculum for training IDIL staff.
- Training of IDIL PCT Staff using modified FP/HIV curriculum.
- Accreditation of the IDIL PCT Programme as an integrated FP/HIV care site by MOH.
- Integration of SRH indicators into the existing IDIL -PCT Database.
- Development of IEC Materials.

The Integrated FP/HIV services were officially rolled out on the 15th of April 2009.

Challenges:

The implementation of this project was delayed due to a number of reasons:

- There was need to gain consensus across the different partners in the SRH team as well as other departments within IDIL, other than the PCT Programme, which caused a delay in training and implementation.
- Because there was no existing curriculum at MOH for training staff in FP/HIV integration, adopting the

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curriculum that was used to train IDIL staffs was delayed.

- Integrating SRH indicators into the IDIL clinic database, e.g rate pregnancy events, pregnancy intention, family planning use by method etc
- There was a delay in procuring project materials including Information, Education and Communication (IEC) materials.
- There was also a delay in obtaining permission to use copyrighted IEC materials that had been developed locally by organization Engender Health, FHI-Uganda etc for FP/HIV integration.
- Since it was a one year programme that experienced implementation delays, the stated objective of reducing unplanned pregnancies by 40% may not be obtained in the stipulated time.

Solutions:

In partnership with Family Health International (FHI) - Uganda, IDIL obtained the required curriculum and other materials that were used to train its staffs. FHI-Uganda contracted two consultants to conduct the training.

Now that the key processes for FP services roll-out have been attained (curriculum development, training, and accreditation of the clinic) no further considerable delays in implementation (attributable to integration) are anticipated.

Benefits:

One of the unforeseen benefits of the project this far has been the development of academic and programme-oriented careers in SRH and FP areas.

Because of the project outputs, IDIL has been invited to submit a paper in one of the major AIDS journals this year.

IDIL Clients will benefit from additional FP methods including intrauterine devices (IUDs) and subcutaneous hormonal implants by the end of 2009.

The project co-sponsored a two-day didactic training session with the INTERACT project. This collaboration resulted into the addition of syphilis screening into the training in addition to the co-sponsorship.

The IEC materials that IDIL will utilize in the FP services have been developed in partnership with FHI-Uganda. The project therefore has led to strengthening of partnerships between IDIL and other institutions.

In conclusion, even though the initial period of the project experienced a few set backs, the project is finally running smoothly.
Ongoing and future planned activities include:

- Implementation of the structured and integrated FP services in the IDIL clinic
- Validation of IDIL database with regard to SRH indicators
- Evaluation of the impact of the FP model of care outcomes.
- Modifications of FP/HIV integrated curriculum based on project experience
- Dissemination of project experience and modified FP/HIV integrated curriculum.

We would like to acknowledge TIDES Africa Fund for the financial support that has enabled IDIL to integrate sexual reproductive health issues into HIV prevention, care and treatment.

Curbing the HIV/AIDS Epidemic in Sub-Saharan Africa; Can PositivePrevention work ?

By Dr. Elizabeth Matovu,
Dr. Estella Birabwa, and
Dr Stella Zawedde-Muyanja

Traditionally HIV Prevention efforts concentrated on reducing HIV acquisition risk, focusing primarily on uninfected individuals or ignoring the serostatus of target populations; yet only persons with HIV, often a much smaller population than those at risk, can transmit HIV.

As a result of this, despite scale up of Voluntary Counselling & Testing (VCT) and antiretroviral treatment (ART) in Sub Saharan Africa, prevention efforts have not kept pace, yet investment in prevention is cost-effective, since future care and treatment costs are averted.

Most people with HIV want to prevent others from being infected with HIV, but they may practice sexual behaviours that put others at risk of infection. Most people with HIV also want to protect themselves from acquiring other sexually transmitted infections but they may be unsure as to how to do so.

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This article explores recommendations for discussing HIV transmission and prevention with HIV infected patients with the goal of reducing HIV transmission. This aspect of care is referred to as "Prevention with Positives" or "Positive Prevention".
Positive Prevention is not a replacement of HIV prevention strategies, but rather an augmentation of the generalised HIV prevention strategies.

Positive Prevention strategies focus both on the individual and community level interventions.

Individual-level intervention strategies include:

- VCT for persons whose HIV status is unknown and post test counselling for those found to be infected
- Ongoing behavioural counselling for People Living with HIV/AIDS (PLWHA), aimed at reducing the likelihood of HIV transmission. Counselling may include support for sexual abstinence, reduction in number or concurrency of sexual partners, correct and consistent use of condoms and avoidance of drug use in conjunction with sex.
- Discussion with PLWHA about their disclosure status to their sexual partners and family. This discussion could include the need to disclose, readiness to disclose and fears associated with disclosure. The health care worker may then offer counsellor mediated (supported disclosure) as an option for those who may want to disclose but fear to do so.
- In some communities HIV infected people have been encouraged to have sex with only other HIV infected partners. This practise is known as sero-sorting and has been reported to result in reduction in HIV transmission rates.
- Encouraging of Injection drug users not to reuse or share needles and syringes and to safely dispose of them after use. They should also be provided with counsellor or psychiatric support to help them stop substance abuse

Community Level Interventions include:

- Widespread provision of ART and developing of strategies to increase adherence to therapeutic treatment regimens. Ensuring good adherence will facilitate maximum viral suppression thus reducing transmission risk. Interventions to improve adherence include: adherence counselling, use of pill boxes and medication companions. These can be provided in clinical, community or home based settings.
- Reducing stigma and discrimination toward PLWHA in healthcare settings. This can be done by active involvement of PLWHA in the planning, delivering and monitoring of prevention, care and treatment activities. This ensures that the interventions that are made address their comprehensive needs in an environment free from fear and discrimination
- Community based provision and promotion of condoms to sexually active individuals. Condom use is an essential component of prevention strategies for PLWHA because it helps to prevent transmission to HIV negative partners, reduce the risk of acquiring other STIs, other strains of HIV that may be difficult to treat and unwanted pregnancies.
- Providing all HIV positive women with support to prevent mother to child transmission through nationwide PMTCT programmes.

Delivery of these Modes of Prevention:
Clinics are key settings for delivery of both individual and community level interventions: This is because people with HIV need frequent medical care to monitor antiretroviral effects and to treat opportunistic infections as HIV disease progresses.

Likewise, PLWHA are part of their broader community and can positively influence their communities through the development of Peer Support groups that can increase awareness.

In view of the above, there has been an increasing call to incorporate what is known as 'positive prevention' in the continuum of prevention and care programmes and services.

In line with this, the IDI took an initiative to identify 2 special groups through which these interventions could be channeled. These are the discordant couples and young adults aged 16 to 24 years. This evolved into the emergence of new models of care targeted towards them hence the "Discordant Couples Clinic" and "Transition Clinic". These new models of care will help us understand the concept, objectives and programmatic features of positive prevention in view of influencing other service providers.

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2. www. PEPFAR. gov: Prevention with Positives,, Updated Jan 2009.
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Drug Preparation:

By Barbara Namirembe, Pharmacist (MPS)

Lidocaine as a diluent for administration of benzathine penicillin G

Benzathine penicillin G is recommended for the treatment of syphillis. Its main disadvantage is local pain and discomfort associated with the injection. Lignocaine as a diluent may reduce this discomfort. In a study comparing the administration of benzathine penicillin G with two diluents; sterile water and Lignocaine hydrochloride 1% for penicillin concentrations and pain of injection, results showed that the use of Lignocaine hydrochloride as a diluent for benzathine penicillin G does not change the penicillin concentration in body fluids and significantly reduces the pain of injection. It was therefore recommended that Lignocaine hydrochloride 1% be used as a diluent for benzathine penicillin G.

To reconstitute a single vial of benzathine penicillin 1.2 million International Units (IU) use one of the procedures below:

Procedure 1: Reconstitution with water-for-injection

Add 4 ml of water for injection to the vial of benzathine penicillin. The final volume will be 4.6mls

Procedure 2: Reconstitution with Lignocaine 0.5%.

Add 4 ml of lignocaine 0.5% to the vial of benzathine penicillin. The final volume will be 4.6mls

Note:

- Water-for-injection and lignocaine 0.5% are the diluents.
- Never use less than 4mls of the diluent to reconstitute.
- Where here Lignocaine is to be used as diluent, it must be 0.5%: half the strength normally used for local anesthesia. If only 1 % concentration is available, it must be diluted to 0.5%. This dilution can done by mixing equal parts of water-for-injection and lignocaine 1% e.g. to get 4 mls of Lignocaine 0.5% mix 2mls of lignocaine 1% with 2mls of water-for-injection.

Treatment of early syphillis i.e. primary or secondary syphilis (syphillis of less than 2 years) using benzathine penicillin	
Dose	One dose of 2.4 million units (i.e. 2 vials of 1.2 million IU)
Reconstitution	Mix each vial with 4ml of water-for-injection or Lignocaine 0.5%
Administration	4.6mls (1 vial) into each buttock
Treatment of syphillis of more than 2 years or un-known duration	
Dose	3 doses of 1.8g or 2.4 million units = 2 vials at 1 week intervals
reconstitute	Mix each vial with 4ml of water for injection or Lignocaine 0.5%
Administration	4.6mls (1 vial) into each buttock

Other important facts about reconstitution and administration of benzathine penicillin

Gently mix – don't shake: Rolling the vial between hands is the preferred technique. This also aids warming the solution.

Use a 19G needle as a minimum: A wider bore needle is obviously less likely to obstruct. A failed injection due to a blocked needle is both physically and psychologically more painful.

Do not reduce the recommended volume of diluent: A more concentrated solution is more likely to lead to needle obstruction and is also more painful.

Avoid delay once mixed: Delay potentially increases the likelihood of precipitation.

Use a luer lock syringe: Luer-lock syringes will help prevent unwarranted spray of penicillin.

For references for this article contact ATIC

Genital warts... the secret problem !

By Dr.Edith Nyangoma,
Dept of Internal medicine

other names are; **Condyloma , Condylomata acuminata, Venereal warts, Anogenital warts**

Introduction

Genital warts are the most easily recognized signs of a highly contagious sexually transmitted infection caused by some sub-types of human papillomavirus (HPV).
Genital warts can be caused by any of types 6, 11, 30, 42, 43, 44, 45, 51, 52 and 54 of genital HPV but types 6 and 11 are responsible for 90% of cases seen.

Less than 1% of those infected develop clinically obvious warts, but all those infected can transmit the virus. One source states that 70% of those who have sexual contact with an infected partner develop genital warts.
HPV also causes many cases of cervical cancer and probably most of anal cancer cases; types 16 and 18 account for 70% of cases.

Transmission:

HPV is spread through direct skin-to-skin contact, during oral, genital, or anal sex with an infected partner

The viral particles penetrate the skin and mucosal surfaces through microscopic abrasions in the genital area, which occur during sexual activity. Once cells are invaded by HPV, a latency (quiet) period of months to years may occur. During this period, the patient has no symptoms. Having sex with a partner whose HPV infection is latent and demonstrates no outward symptoms still leaves one vulnerable to becoming infected. The immune system eventually clears the virus through interleukins, which recruit interferons, which slow viral replication.

Epidemiology

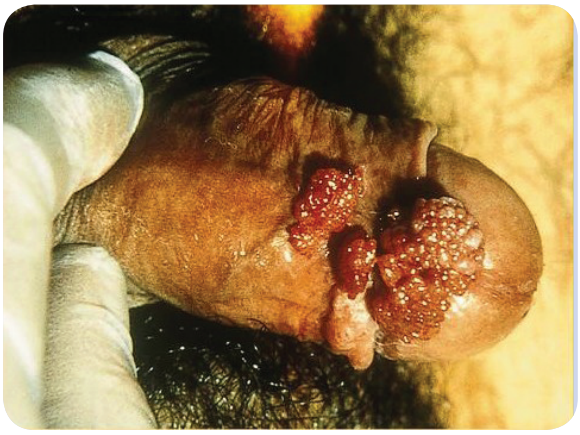
HPV has become extremely common all over the world, with an estimated prevalence in the US of 10-20% and clinical manifestations in 1% of the adult sexually active population.
In Uganda, about 80% of the population is infected with one of the 37 subtypes of the HPV virus. The majority of those infected are between the ages of 17-33 years.

Although the prevalence of infection between men and women tends to be equal, the symptoms tend to manifest mostly in women.
At Infectious Disease Institute (IDI), genital warts are seen in approximately 20 % of patients, predominantly occurring in females.

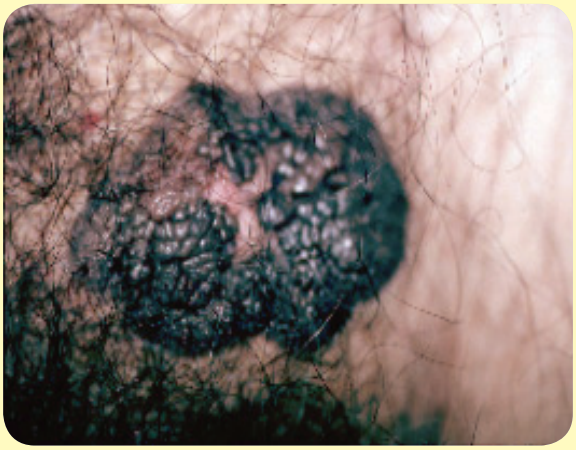
Human papillomavirus (HPV) infection appears to be more common and worse in patients with various types of immunologic deficiencies. Recurrence rate, size, discomfort, and risk of progression to cancer are highest among these patients.

Clinical Features

- Genital warts often occur in clusters and can be very tiny or can spread into large masses in the genital or penile area. In other cases they look like small stalks.
- In men, the symptoms may be less obvious but when present, they usually are seen on the tip of the penis. They also may be found on the shaft of the penis, on the scrotum, or around the anus.



- In women they occur on the outside and inside of the vagina, on the opening (cervix) to the womb (uterus), or around the anus.



- Rarely, genital warts also can develop in the mouth or throat of a person who has had oral sex with an infected person.
- Acute urethral obstruction has also been reported in some women.
- Bleeding has been reported due to flat warts of the penile urethral meatus (usually associated with HPV-16) and in the large lesions that can occur during pregnancy.
- Large genital lesions may also lead to disfigurement
- When the immune system is challenged by HIV, pregnancy and other immuno suppressed states, genital warts develop and may be seen to be extensive and clinically bothersome.
- Latent illness often becomes active during pregnancy due the immune suppression and may interfere with child birth. Trauma may occur producing crusting or erythema.

Treatment

There is no cure for HPV, but there are methods available to treat visible and problematic warts, which could reduce infectivity; although there are no trials studying the effectiveness of removing visible warts in reducing transmission.

Genital warts may disappear without treatment, but may sometimes develop a fleshy, small raised growth. There is no way to predict whether they will grow or disappear.

It has been noted that when HIV seropositive patients are initiated on HAART, many genital warts regress and may disappear completely with the recovery of immune system. However depending on the size, number and location of the warts, and other factors, the clinician will offer one of several ways to treat them.

Podophylline is the first-line treatment due to its low cost. It is a cytotoxic agent used topically by patient. However this treatment can potentially cause depigmentation or scarring.

The patient applies 0.15% – 0.5% podophylline solution in a gel or cream to the affected area and does not washed it off. Its use is cycled (2 times per day for 3 days then 4-7 days off); one review states that it should only be used for four cycles. .

Caution: Podophylline is not safe for use in pregnancy as it may be absorbed by the skin and could cause birth defects in the fetus.

Another treatment available is Imiquimod (Aldara). It is a topical immune modifier cream that induces secretion of interferon alpha and other cytokines. It is applied to the affected area. It causes less local irritation than podophylline and has a better clinical response, but may cause fungal infections and flu-like illness. Imiquimod may not be readily available in pharmacies in Uganda.

Other doctor-applied treatments include liquid nitrogen cryosurgery which is safe for pregnancy. It kills warts 71-79% of the time, but recurrence is 38% to 73% six months after treatment. Local infections have been reported.

Trichloroacetic acid (TCA) is less effective than cryosurgery, and is not recommended for use in the vagina, cervix, or urinary meatus.

Surgical excision may be done and is best for large warts, but has a greater risk of scarring.

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3. O'Mahony C . Genital warts: current and future management options". Am J Clin Dermatol 6 (4): 239–43. 2005.

GUIDELINES FOR

TELEPHONIC CONSULTATION:

By Dr. Stella Zawedde - Muyanja
Medical Officer, ATIC

The AIDS Treatment Information Centre aims to support you to make appropriate treatment decisions for your patients. We require basic information about your patients when you call us, this will help us serve you promptly. Please take a few moments to read the table below.

In the left column, a checklist of the information we need is provided. In the right column, we explain why this information is important to us.

We look forward to receiving your call.

Check list for telephonic consultation:

Information	Importance
Age	The age affects the type of drug chosen to treat a patient and the dose of drug used e.g. EFV is contra-indicated in children below 3 years due to CNS side-effects and in the very old due to concerns about reduced renal clearance
Gender	This along with age may also change the choice of treatment for certain diseases e.g. it may make the clinician consider the potential for pregnancy or breastfeeding in an individual.
Presenting complaint	These are the symptoms that the patient describes and the signs seen by the clinician on examination. If a working diagnosis has already been reached in this patient, it would be useful to include it in your background information
Management given as far	This describes all the medicines and supportive treatment e.g. counselling that have been given to the patient. This helps the respondent know the appropriate medicine to prescribe and also helps them avoid drug-drug interactions.
Medical history	This includes all the conditions past and ongoing that the patient has. Understanding the patients previous medical history helps the respondent know whether this is a recurrent disease or index episode e.g. if a patient has TB, it would be useful to know whether it was an index episode or it is a relapse. It also helps guide appropriate therapy by identifying on going potential contra-indications e.g. beta-blockers in an asthmatic, EFV in a person with history of mental illness. Knowing the ongoing medical conditions helps ensure that the management of the current disease doesn't affect negatively the management of an ongoing illness.
Medications in the recent month	If it is a recurrent condition, it helps to know what drugs have been used to manage it in the recent past. e.g. if the patient has a recurrent UTI, it would be useful to know what drugs have been used to treat it in the past.
Laboratory	laboratory results can help in diagnosis of the patients' disease, monitoring of patients' progress and can be used as a guide to adjust therapy e.g. CD4 cell counts and Viral Loads in ART therapy
Social history	Social history impacts on ability to afford medicines, to be retained in chronic care (transport costs) and to adhere to medicines. It is therefore an important part of the patients' history that should not be left out.

To help you learn how to use the above information, we have given you 2 examples of queries that came into the ATIC and how they should have been asked.

Question 1:

We have an HIV positive lady who has sputum positive TB and has failed to convert to sputum negative after 3 months of intensive phase of TB treatment.
How should we manage her now?

This question is incomplete it lacks essential background information.
Using the table above, let us try to fit in the missing information and see how the query will look afterwards.

Missing Parameter	Information
Age	55 years
Presenting complaint	Persistent cough for 4 months
Management given as far (for this illness)	Intensive phase of 2HRZE for 2 months followed by 1 month extension of Intensive Phase.
Other Medications in the recent past e.g. last month	Septrin Prophylaxis. No ARVs yet. No drugs for any concurrent illness.
Laboratory	CD4 cell count 430 (Dec 2008) Sputum +ve for AAFBs (April 2009, June 2009 and again in July 2009)
Social history	Good medication adherence and good family support.

The question properly formulated would then read:

*We have a 55 year old, female patient **(age and sex)** who is HIV positive; **(medical history)** She is on septrin prophylaxis but not on ART **(drug history)**. Her last CD4 cell count was 430 (December 2008) **(lab history).***
*She was diagnosed with sputum positive PTB in April 2009 and started on 2HRZE in April 2009. **(lab and drug history)***
*After 8 weeks of intensive phase, her sputum was still positive for AAFBs so she was given an extra month of HRZE. **(lab and drug history)***
*Her sputum exam was repeated at the end of the 3rd month of treatment and still came back still positive for AAFBs. **(lab history)***
*She claims to be adherent to her medications and has good family support **(social history)***

How should we manage her from this point onwards?

Question 2:

What is the maximum dose of morphine that can be given to a patient?

This question too is incomplete it lacks essential background information.
Using the table above, let us try to fit in the missing information and see how the query will look afterwards.

Missing Parameter	Information
Age	60 years
Gender	Male
Presenting complaint	Pain
Management given as far (for this illness)	None, diagnosed too late for any interventions.
Medical history	Has Cancer of the Prostate Stage IV No history of respiratory distress.
Other Medications in the recent past e.g. past month	Oral Pain relief with Panadol Codeine phosphate with Bisacodyl Oral Morphine 5mg/ 5mls PRN.
Laboratory	Biopsy confirmed Ca Prostate
Social history	Good medication adherence and good family support.

When all the above are put into consideration, the right question should have been

*We have a 60 year old **(age)** man **(gender)** who was diagnosed with Ca prostate Stage IV **(medical history)**, he is in a lot of pain **(presenting complaint)** and has been managed on Panadol and then Codeine Phosphate and oral morphine 5mg/5mls PRN **(other medications in the recent past)** but pain control has not been achieved.*
*He has no evidence of respiratory distress. **(medical history)***

What is the maximum dose of morphine that we can give him?

ASK ATIC :

By Stella Zawedde-Muyanja, MB ChB

PMTCT Continued....

In our last issue we explored how to administer drugs for PMTCT. In this issue, we would like to continue with PMTCT particularly how to manage babies who have been exposed to HIV. Our discussion will revolve around 2 questions that came into ATIC recently.

Question 1:

An HIV positive mother with no previously known CD4 cell counts, who did not receive any PMTCT during pregnancy or delivery. brought her baby to our health center 1 week after C-Section for PMTCT. Should we start this child on Zidovudine syrup?

This question rises the issue of use of ARVs for PMTCT in babies. It can also be rephrased as: When is the optimum time to give an HIV exposed child ARVs for PMTCT?

To answer this question, let us investigate the reasons behind:

a) The use of NVP syrup for PMTCT and;
b) The use of zidovudine (AZT) syrup as a continuation of single dose NVP given at birth.

a) PMTCT works on the principle of Post Exposure Prophylaxis (PEP) for HIV exposed people.
When HIV infects the body, it is picked up from the site of infection by a type of white cells known as dendritic cells. These cells then present the virus to the CD4 cells which then transport it into the blood stream and subsequently into the reservoir cells like the brain, the eye and the testes. The time lag between infection and entry into the reservoir cells has been noted to be 72hours.

When a person takes any form of PEP (in this case PMTCT drugs for the babies) the ARVs act to prevent the infection from taking root in our bodies by preventing the uptake of the HIV virus from the dendritic cells into the CD4 cells thereby preventing its entry into the reservoir cells.

Once the HIV virus enters the reservoir cells, the ARVs cannot penetrate them to eradicate HIV from them. Therefore after 72 hours of exposure the ARVs are not likely to prevent possible infection. That's why it is very important for any type of PEP including PMTCT to be given as soon as possible after exposure.

b) It takes about 1 week for Nevirapine syrup to be eliminated from the body. AZT syrup is given for this period to prevent the baby's body from being exposed to only Nevirapine (monotherapy) which would result into emergence of resistance to nevirapine. After 7 days, it would not be very useful for the baby to receive AZT syrup.

Our answer to the question would therefore be:
Do not give the baby any form of PMTCT (including Zidovudine syrup) but review it at 4-6 weeks.
When it (the baby) is brought back to the health center at 4-6weeks, take off blood for a DNA PCR and start it on septrin prophylaxis.

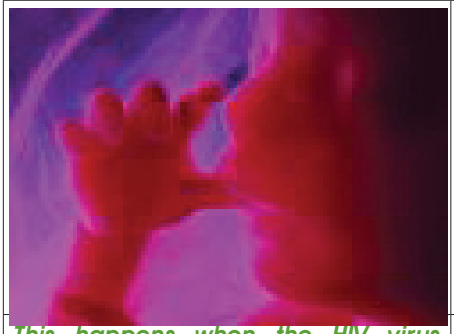
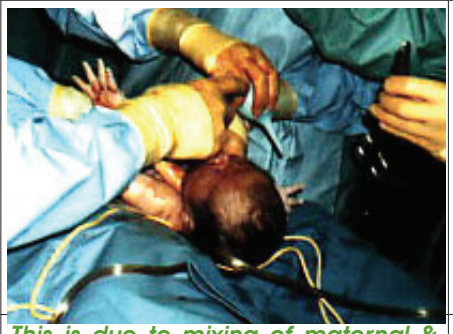
Once the HIV virus enters the reservoir cells, the ARVs cannot penetrate them to eradicate HIV from them. Therefore after 72 hours of exposure the ARVs are not likely to prevent possible infection.

Question 2:

This question is on the use of Septrin Prophylaxis in Infants:
When a Dried Blood Spot (test for HIV infection that uses the DNA PCR technique) done at 6 weeks comes back negative in an HIV exposed child who is still breast feeding, do we stop septrin prophylaxis?

To answer this question, let us review the 3 routes of Mother - to - child transmission (MTCT) and the magnitude of risk associated with each.

MTCT Routes and the Degree of risk associated:

Route: Intra-utrerine (when the baby is in the womb) Risk: 15-25%	Route: Intra-partum (at delivery) Risk: 50-60%	Route: Post-partum (during breast feeding) Risk: 15-25%
		
This happens when the HIV virus crosses the placental barrier. Placental infections e.g. malaria and chorioamninitis increase the risk of this happening.	***This is due to mixing of maternal & foetal blood. The rate of transmission is higher in vaginal births than in caesarean births and is increased by practices like artificial rapture of membranes and routine episiotomies***	***This is due to secretion of HIV virus in breast milk. Most of these transmissions occur in the 1st two months of life. Transmission is increased if the mother has any breast lesions e.g. mastitis or if the child has wounds in the mouth or the intestines.***

From the above data, we see that as long as the child is breastfeeding, there is still a risk of getting infected with HIV. This is emphasized in the Uganda National Guidelines on the use of Septrin Prophylaxis that states:

"Cotrimoxazole prophylaxis is indicated for all HIV exposed children (children born to HIV infected mothers) from 4-6 weeks of age (whether or not part of a prevention of mother-to-child transmission [PMTCT] programme), until HIV infection has been definitively ruled out AND the mother is no longer breastfeeding."

Therefore although the DNA PCR is a very accurate test and the results mean that the baby is HIV negative at 6 weeks, there is still a 15-25% risk of infection through breastfeeding.

Our answer to this question therefore is:
Do not stop septrin prophylaxis for this child. Continue septrin until an HIV test preformed after weaning confirms that the baby is HIV negative.

We hope you have found these discussions informative. Look out for "ASK ATIC" in our next issue for more interesting questions for discussion.
Remember to BEEP ATIC hotlines if you have any questions on the management of HIV/AIDS and related infectious diseases.

References:

1. The Uganda National PMTCT guidelines
2. The Uganda National Guidelines on the use of Cotrimoxazole prophylaxis in HIV positive adults and children
3. Acute HIV immunodeficiency Virus Type 1 infection: Kahn et al , New England Journal of Medicine 1998, 339(1) 33-39

ABOUT ATIC :

Allen Mukhwana
ATIC - Research and Communication

What is ATIC?

ATIC is The AIDS Treatment Information Centre which is a part of the Training Department of Infectious Diseases Institute Ltd (IDIL).

We aim to support you in the provision of high quality care and treatment of HIV/AIDS and related infectious diseases.

You can also contact us if you would like to treatment information in the management of your HIV infected patients who have non-infectious disease e.g. hypertension, diabetes mellitus, etc.

What are our activities?

We receive and respond to queries on ;

- Clinical Case management e.g. questions on diagnosis of clinical conditions, patient management and patient referral
- Drug information including Drug identification, Drug availability and cost, Drug –Drug interactions, Adverse Drug Reactions, and Treatment Failure
- Mandated as the national switching centre by the Ministry of Health.
- other areas like vaccines administration, Information sources (Various National Treatment Guidelines)

We develop and distribute Information Education and Communication materials i.e. newsletters, drug interaction charts, drug identification charts, malaria management charts etc..

We train health care workers in HIV and other infectious diseases and carry out Continuing Medical Education and Continuing Pharmacy Development (CME/CPD) at different hospitals and health centers

Who are our Staff?

The ATIC team comprises of 2 pharmacists, 1 Medical Officer and 1 Research and Communication person.

We have a wealth of resources; institutional, human and material. ATIC collaborates with the Ministry of Health.

We are backed up by physicians, pharmacy personnel, laboratory personnel, nursing officers and counsellors in IDIL.

Institutionally, IDIL is a part of the Medical School in the College of Health Sciences of Makerere University.

Who do we serve?

We serve all the Health Care workers i.e. consultants, physicians, medical officers, nurses/midwives, clinical officers, laboratory personnel, pharmacy personnel, counsellors, nursing assistants etc, in Uganda and the rest of Africa.

How Can one Make a Query

ATIC has warm line numbers (0414-307245/228 and 0312-307245/228) which any health care worker in Uganda can "beep". When you beep, your number and the time of call are registered within our soft phone system. Health Care workers from elsewhere can send their queries via email to queries@atic.idi.co.ug.

We will call you back so that we can take your query (more help on how to make a query is given on page……). The team will discuss/research your query and then call you back with a response within the shortest time possible. Most of our queries are answered within less than an hour.

Sometimes your answer maybe delayed if the ATIC team needs more time to research about your question.

We have several resources at our disposal from which to consult/research e.g. College of Health Sciences, Research Department at IDI, the Clinic among others.

Reminder:

Our warm-line numbers are 0414-307245/228 and 0312-307245/228.

You can also send your queries through email to queries@atic.idi.co.ug. Queries made via email will be answered through email unless you indicate that you prefer to be answered by phone. Please always include you telephone contacts in your email.

ATIC
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