



Centre answers AIDS queries

BY BARBARA BITANGARO

HEALTH workers dealing with HIV/AIDS care and management in Africa do not need to worry anymore on where to get answers to their questions about patient care. A new AIDS Treatment Information Centre (ATIC), the first of its kind in Africa, is now operational at Mulago Hospital, Kampala.

ATIC is equipped with a state-of-the-art call-in centre for health workers to call in and have their queries answered by pharmacists and physicians specialised in HIV/AIDS.

So far over 100 questions from Botswana and Uganda have been answered by these specialists.

The centre only answers questions from health care providers so as to encourage patients to seek medical services from health care profes-



Henry Bongweine

AN ATIC HIV clinical pharmacist gets busy at IPH, Mulago

sionals and to promote rational drug use.

The number of the caller will be automatically registered by

the system so that next time the person makes a call it will be free.

This system automatically

develops a data base for previous calls and also keeps track of frequently asked questions. ATIC hotlines are tentatively 041-542352/542283.

ATIC's vision is to develop a sustainable framework for the provision of a specialist AIDS treatment information service which will enhance AIDS care in Africa and serve as a model for other resource-limited settings.

The centre has a newsletter in which health workers are encouraged to document their experiences in dealing with the epidemic. *ATIC News* runs articles on biomedical research, continuing medical education updates and other issues.

ATIC staff also give training to health workers in HIV management and care with specific emphasis on the administration of ARVs.

Carraguard may block HIV

HIV may be ferried deep into the lymphatic system from the vagina by immune system cells known as macrophages, suggests new research conducted by the Population Council virologist David M. Philips.

The Council's lead candidate microbicide gel, Carraguard®, is effective at reducing this form of HIV transmission in lab animals. The Population Council is preparing to enter large-scale efficacy trials to test Carraguard's efficacy in

blocking HIV transmission in 4,000 non-pregnant women. The microbicide will be one of the first products to enter this phase of research.

The active ingredient in Carraguard is carrageenan, a substance derived from seaweed. Carrageenan compounds are on the U.S. Food and Drug Administration's list of GRAS (generally recognised as safe) products for consumption and topical application.

The term 'microbicide' refers

to a range of products, in cream, gel, film, or suppository form, that would substantially reduce the transmission of HIV - and possibly other sexually transmitted infections - when applied topically.

If proven viable, these products would offer a powerful new prevention tool in the fight against AIDS.

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From The Editor

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ATIC is located on 1st floor
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Correct information is key

The AIDS Treatment Information Centre (ATIC) is now operational. ATIC has a toll free call-in centre, a newsletter and website as its main channels of HIV/AIDS information to health workers across Africa. HIV clinical pharmacists and physicians have so far answered over 100 queries and ATIC's first quarterly newsletter was distributed to 2,000 individuals and organisations dealing in HIV management in Africa and the rest of the world. Health workers can now have correct information when complex issues of adverse drug interactions, drug resistance and drug reactions arise among their patients. AIDS is infecting and affecting millions of families, and creat-

ing millions of orphans who have no source of livelihood. Our patients die when we make errors (see page 5). We can no longer afford to be bland. Let us talk to our patients about the gravity of the situation and give them the right information to allow them to make major decisions about their lives and those of their families. They must know that antiretrovirals (ARVs) are not a cure and even when they feel better, they can infect their sexual partners. Health workers must use the available knowledge about HIV/AIDS fully if we are to avert a human catastrophe. Since 1996, the use of antiretroviral medicines has dramatically reduced AIDS-related illness and death

in the western world where these drugs are widely accessible. This process can be replicated in Africa. ATIC's decision to use varying means of communication to reach its target audience - health workers, will fill in the information gaps. Clinical pharmacists, public health workers and researchers at the ATIC will therefore continuously produce correct, timely and up-to-date information. In this way, ATIC will link up public health care workers, private practitioners and specialists across sub-Saharan Africa to improve quality of care for the 28 million adults and children with HIV/AIDS in the region. Let us act together and act fast.

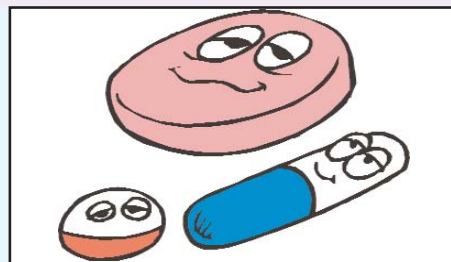
Drug authority to analyse ARVs

By Peter Ssali

ON November 28, 2003, World Health Organisation (WHO) issued Alert No. 110, warning member states about counterfeit triple antiretroviral (ARV) combination product Ginovir 3D, detected in Cote d'Ivoire. (WHO Drug Information, Vol 17, No.3, 2003, p160)

As per the label claim, each capsule of Ginovir 3D was stated to contain zidovudine (200mg), lamivudine (150mg) and indinavir (400mg). However, according to laboratory results, the sample did not show any lamivudine or indinavir; the capsules were found to contain 201mg of zidovudine and 40mg of stavudine per capsule, in addition to a non-identified substance.

The product was analysed by Agence Francaise de Securite Sanitaire des Produits de Sante' (AFSSAPS) on request from the Association of AIDS



patients (Association AIDES) in Cote d'Ivoire.

As a result of this, and as part of its routine quality assurance measures, Uganda National Drug Authority is making preparations for laboratory analysis of antiretroviral (ARV) drugs with emphasis on generic drugs. Laboratory tests have already started at the National Drug Quality Control Laboratory (NDQCL).

The analysis of ARV drugs requires expensive analytical equipment, chemicals and reagents, and chemical refer-

ence substances that are used as standards for the qualitative and quantitative tests. This analysis is also constrained by the lack of well established quality specifications.

Counterfeit medicine is a global concern and part of the broader phenomenon of substandard pharmaceuticals, which are deliberately and fraudulently mislabelled with respect to identity or source and may include products with the correct ingredients but fake packaging, with the wrong ingredients, without active ingredients or with insufficient active ingredients.

WHO survey of counterfeit medicines reports from 20 countries between January 1999 to October 2000 found that 60% of counterfeit medicine cases occurred in poor countries and 40% in industrialised countries.

The writer is the Senior Drug Quality Analyst NDA— Uganda

WHO warned member states about counterfeit antiretrovirals

Lopinavir, an interesting PI

Lopinavir/ritonavir (LPV/r) is a combination or 'boost' protease inhibitor. Lopinavir is the active agent to prevent HIV replication, while a low dose of ritonavir inhibits lopinavir metabolism, and boosts the drug levels, writes **Kimberly Scarsi**.

INDICATION: LPV/r is indicated for use in combination with other antiretroviral agents for the treatment of HIV-infection.^{1,2}

Dosage/ administration^{1,2}

Adult: LPV/r 400/100 mg (3 capsules or 5 mL of oral solution) twice daily taken with food.

When taken with efavirenz or nevirapine: LPV/r 533/133 mg (4 capsules or 6.5 mL) twice daily taken with food.

Non-FDA approved dosing currently under investigation: LPV/r 800/200 mg (6 capsules or 10 mL of oral solution) once daily taken with food.^{3,4}

Paediatrics: Indicated for children 6 months to 12 years of age.

For children between 7-15 kg the LPV/r dose is 12/3 mg/kg twice daily with food. For children between 15-40 kg the dose is 10/2.5 mg/kg. For children >40kg the dose should not exceed 400mg/100mg twice daily.

When taken with efavirenz or nevirapine: LPV/r 13/3.25 mg/kg for those 7-15 kg, 11/2.75 mg/kg for those 15-45 kg, up to a maximum of 533/133 mg for those >45 kg.

Pregnant Women: No known dosage adjustments at this time, research is ongoing.^{1,2}

Co administration and cost: LPV/r is usually prescribed with two NRTIs, most commonly AZT and 3TC. It should never be prescribed alone. The cost of a months supply in

Uganda for an adult is approximately 110,000 shillings or about US\$60.

Contraindications and precautions^{1,2}

Hypersensitivity to either lopinavir or ritonavir.

LPV/r is an inhibitor of the cytochrome P450 (CYP3A and CYP2D6). Coadministration of LPV/r with drugs that are metabolised by CYP3A or CYP2D6 may result in significant elevations of these agents.

LPV/r should be used cautiously in patients who require a drug that may result in serious or life-threatening toxicities due to elevated plasma concentrations. (**see interactions section**)

Hyperglycemia and new onset diabetes have been observed in patients after the initiation of protease inhibitors. Monitoring of patients glucose is recommended after initiation.

Side Effects^{1,2}

The most common side effect associated with LPV/r therapy is diarrhoea. The diarrhoea is usually mild to moderate, and similar to other protease inhibitors.

Nausea and vomiting are other potential gastrointestinal side effects with LPV/r therapy. Hypercholesterolemia and hypertriglyceridemia, can occur with LPV/r therapy.

The hypertriglyceridemia may be more common with LPV/r than other protease inhibitors.

Another side effect reported with LPV/r and protease inhibitors in general is redistribution/accumulation of body fat.

Monitoring Parameters

Ideally liver enzymes during the first several months of therapy and cholesterol and glucose periodically.^{1,2}

Interruption of therapy

If a patient misses a dose of LPV/r, the dose should be taken as soon as it is remem-

bered. If the dose is not remembered until the following dose due time, a double dose of LPV/r should not be taken to make up for the missed dose.

Treatment should be interrupted if any serious or life-threatening adverse effects occur.

If therapy is interrupted for several days, monitor for dose changes required with concomitant medications due to the LPV/r CYP3A and CYP2D6 enzyme inhibition.^{1,2}

Interactions^{1,2}

Metabolism of lopinavir is almost entirely via CYP3A and concomitant use of medications that induce this enzyme may result in reduced plasma concentrations of LPV/r. This decrease in plasma concentrations may increase the risk of virologic failure and the development of viral resistance. (Example: See dosing of LPV/r in combination with efavirenz and nevirapine)

The use of some agents with LPV/r is contraindicated because of the risk of virologic failure and resistance: rifampicin and St. John's wort (*hypericum perforatum*).

LPV/r is also a potent inhibitor of CYP3A and CYP2D6 isoenzymes. This may result in increased blood levels of drugs metabolised by these isoenzymes when used concomitantly with LPV/r (Example: ketoconazole, other protease inhibitors).

The use of some agents with LPV/r is contraindicated due to dangerous side effects from increased blood concentrations of the concomitant medication: flecainide, propafenone, astemizole, terfenadine, ergotamine, dihydroergotamine, cisapride, lovastatin, simvastatin, pimozone, midazolam, and triazolam.

Pregnancy, lactation, post-exposure prophylaxis^{1,2}

LPV/r is classified as a

Pregnancy Category C, no treatment related malformations were seen in animal studies. It is not known if LPV/r is excreted in human breast milk. Because of this, it is not recommended for nursing mothers yet.

Storage^{1,2}

LPV/r may be stored at 2-8°C until the expiration date on the bottle. LPV/r may be stored up to 25°C for up to two months.

Presentations^{1,2}

Kaletra capsules provide 133.3 mg of lopinavir and 33.3 mg of ritonavir per capsule.

Kaletra oral solution contains 400mg of lopinavir and 100 mg of ritonavir per 5 mL (80/20 mg/mL),

References

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The writer is an HIV and ID Research and Clinical Pharmacist Northwestern Memorial Hospital Chicago, Illinois



QUESTIONS

with
Robinah Nganwa

HOW can stavudine-induced peripheral neuropathy be managed?

A.K Botswana

NEUROPATHIC pain occurs as a result of damage to neural tissue. Peripheral neuropathy is characterised by persistent numbness, tingling or pain in the feet or hands and occurs most frequently in patients with advanced HIV infection, patients with a history of neuropathy, or patients receiving neurotoxic drugs e.g. stavudine. Stavudine associated peripheral neuropathy appears to be dose-related and symptoms generally resolve if therapy is discontinued. However symptoms may worsen temporarily in some patients following discontinuance of the drug. Use of tricyclic antidepressant and certain antiepileptic drugs usually improves the patient's quality of life. Amitriptyline is prescribed most frequently initially at 25-50mg each night. The dose may be increased gradually to about 75mg daily if required. If manifestations of peripheral neuropathy resolve completely, stavudine therapy may be reinitiated at half the original dose e.g. adults in a dosage of 20mg b.d for those weighing over 60kg and 15mg b.d for those weighing less than 60kg. If peripheral neuropathy recurs then D4T therapy should be permanently discontinued.

Send your questions to
The Clinical Pharmacist,
ATIC News,
P.O. Box 40008,
Kampala

Note that alcohol and smoking may however contribute to general body deterioration

Provider needs to guide HIV patients through care

The developing world is at a point where increased availability of ARVs could lead to complacency in compliance or prevention behaviours, causing development of drug-resistant strains and a rise in HIV incidence. Below is a patient-health provider guide that can be followed to prevent this scenario.

Healthcare Providers Guide

Disease: Patient should understand the pathogenesis of the disease.

Drugs: Discuss the general mechanism of action of antiretrovirals. The fact that the drugs only reduce viral load and do not cure should be emphasised.

Drug Interactions: Other medications the patient should not be taken while on antiretrovirals. This includes other drugs, herbs or supplements as they may affect the efficacy of antiretrovirals. Some ARVs must be taken with food; others without food.

Adherence: Drugs must be taken at a convenient time agreed upon by the doctor and patient, at the same time every day e.g. 8 o'clock in the morning and 8 o'clock in the evening everyday, for twice daily dosing. Upon missing one dose of medicine, patient the dose should be taken as soon as it is remembered; however, if a dose is skipped, a double dose should not be taken to make up for the missed dose. Patient should endeavour to save up monies to keep buying drugs. Even if drugs are being received free, adherence is important. If patient is being sponsored, it is important that sponsor is part of the commitment to treatment.

Drug Toxicities: All drugs have side effects but not every patient will show them. At the beginning of therapy some of these effects will appear but may resolve with time. It's important to encourage the patient to communicate to the doctor any such side effects.

Drug resistance: Failure to maintain drug levels above the required concentration will lead to strains resistant to that particular drug.

Pregnancy: Women/girls should understand the implications of getting pregnant. Drugs taken in the first trimester may affect the



BBC News

An HIV positive mother needs counselling

unborn child. Pregnancy has been known to reduce the effectiveness of the immune system. Pregnancy results from 'unprotected sex'- all HIV patients need to be encouraged to avoid sex without condoms, regardless of whether they are taking ARVs. Patients must consider the well being of the child to be born i.e. it may be born positive.

Nutrition and Healthy living: A proper diet is key in the general well being of the mind and may help the body stay strong.

Disclosure: This may serve as a preventive tool. Encourage social/peer support and address psychological, social, mental, economic and spiritual dimensions of the illness.

Prevention/re-infection: Patient should completely understand that although they are on ARVs they still have the virus in their blood and genital fluids and can still infect others.

Doctor-shopping: Patient should be encouraged to see the same healthcare provider as this makes follow up easier and more comprehensive as the doctor will have a proper history of the patient such as the drugs he/she has been taking, etc.

Compiled by Dr Fred Semitala, Caleb Twijukye, Naomi Nantamu, Robinah Nganwa

IN BRIEF

Rates high

Some 260,000 Batswana are estimated to be HIV positive with close to 30% of them aged between 15 and 49 years of age. Health minister Lesego Motsumi of Botswana said this when officially opening an Infectious Disease Care Clinic (IDCC) at Sekgoma Memorial Hospital in Serowe in April.

Cheap drugs

The University of KwaZulu-Natal, South Africa has become the first tertiary institution in the country to provide antiretrovirals to HIV-positive students. The initiative allows students to access AIDS care, including triple ARVs, for R50 a month. The average monthly cost for treatment, ARVs, counselling, medication, blood tests and doctor's consultations, is R800.

The Alliance

The Academic Alliance for AIDS care and Prevention in Africa (AA) has so far trained 200 health care providers in Africa, in HIV/AIDS care and management.

Successful HIV therapy relies on commitment

With more people accessing antiretroviral therapy, the challenge now is to optimise prescribing of these drugs to ensure that the patients receive maximum benefit. To achieve this, health care providers must emphasise to their patients that ARV's do not cure HIV/AIDS.

Below is a suggested doctor-patient agreement that should be discussed before therapy begins.



WHO/PIVrot

Patient Commitment To Treatment

- I know that the HIV causes the disease AIDS by destroying the immune system and that the HIV virus is most commonly spread through sexual intercourse.
- I understand that antiretroviral drugs don't cure HIV/AIDS but slow the virus so the disease is held in check and my life is usually much better.
- It is essential to inform my doctor about other medicines including herbal and traditional medicines which I may take while on antiretrovirals.
- I need to take all my pills as

To delay progression of HIV, drugs are taken as prescribed

- instructed, everyday for the rest of my life in order to benefit from them.
- I understand that my medicine may cause undesirable effects to my body especially at the beginning of therapy. If this occurs I will communicate this to my doctor.
- If I do not take my pills as instructed, they may stop working on the virus. This may result in signs of AIDS again when the virus returns.

- Women/Girls: I am aware that the antiretrovirals may affect my unborn child especially during the first three months of pregnancy. So if I am having sex, I must avoid pregnancy by using condoms.
- I should endeavour to have the best possible balanced diet and to avoid consumption of alcohol and cigarettes to help keep my body healthy and strong.
- It is important to share my HIV status with people close to me since I will need support during my treatment and if possible they should be trained to be a part of my care team and keep me accountable.
- I know that even though I am on ARVs, I am still infected with the virus and can pass it on to others through sex. I will not have sex without using a condom and whenever possible I will inform my sexual partner about my HIV infection.
- I should try as much as possible to stick to one doctor or care centre throughout my treatment.

Health care provider.....

 Patient.....
 Sponsor.....

The patient is our major ally

By Allan Ronald

HIV is the most complex infectious disease we have ever managed. Patients die when we make errors in dose or choice of drugs. Our patients must be our partners to ensure that they do not die because they have failed to take drugs correctly or inform us of important

symptoms. The patient can become our major ally to ensure that they live at least ten years after we, together, start ARV's, rather than only three years or less due to treatment failure. Already in Kampala we are seeing patients who without proper education are failing treatment. This is tragic. Ten healthy years or longer on

ARVs will only happen if we become partners with the patients and involve them in their own care. Chronic care is a relatively new concept in some parts of the world. Most infectious illnesses are acute and rapidly respond to treatment. Many patients believe that only if they feel sick should they keep appointments and continue to

take medication. Hypertension, diabetes and tuberculosis are easy diseases to treat compared to HIV, but the long term success rate is 30 - 80%. This in part is because we fail as care givers to become partners with the patient.

How do we partner with the patient?

Turn to page 6

Doctors' Forum

ATIC News, P. O. Box 40008, Kampala, email: bbitangaro@iph.ac.ug. ATIC News welcomes experiences from readers

Advice on missed reviews

CASE No.1: This 41-year-old man was started on ARVs twelve months ago. At that time he was WHO stage 3 with an episode of esophageal candidiasis and a CD4 count of 95. He was prescribed stavudine 40mg.bid, lamivudine 150mg.bid and efavirenz 600 mg. each night along with cotrimoxazole. He responded well to this regimen, gained weight, had no side effects except some vivid nightmares, and returned to work. For six months he attended



REVIEWS ARE IMPORTANT

clinic every four weeks and took his meds faithfully. He missed his four weekly review appointment six months ago and was not seen until today. Today he comes to clinic and reports that he feels fine. He has had no recurrence of symptoms and physical examination is unremarkable. The man has lost no weight and he continues to work every day. He says that he wants to restart his ARV medicines. He states that he did not have money to purchase them earlier.

Pulmonary tuberculosis

CASE No.3: This 23 year old man comes to clinic with a cough of 6 weeks duration and a weight loss of 11 kg and is diagnosed with sputum positive pulmonary tuberculosis. A chest x-ray shows bilateral pulmonary infiltrates with hilar lymphadenopathy. The tuberculosis clinic performed an HIV rapid test because; along with TB he had extensive oral thrush.

NOTE: How would you manage these patients? What questions would you ask? What tests would you request? What medicines would you prescribe? What advice would you offer? (See page 8). Cases are from *Nanasi HIV/AIDS Case Studies, 2004* by Richard Brown (MD, MPH, FACC) and Thomas Macharia (MB, ChB).

Influenza and sore throat presentation

CASE No.2: This 17-year-old woman comes to the clinic because she was told at another clinic that she has influenza. She was given amoxicillin tablets. Today she still has fever and a sore throat with swollen lymph nodes in the neck. She has muscle aches and she insists that a malaria

test be done. Physical examination shows a reddened pharynx with no exudate. Lymph nodes are tender. Heart, lungs and abdomen are negative. You note that she has a rash on the face and trunk. A malaria parasite smear is negative.

Partner with the sick for quality care

From page 5

- They need to be educated about their disease in a language and style that they understand. Knowledge is power and we as providers must share it. This can be accomplished both by group and individuals educational sessions and with well-designed information packages.
- Most patients are far more committed to their health and well-being than we ever could be. As a result, they usually become willing partners with us in learning about HIV, its complications and its treatment.
- Other family members must be involved. Denial and stigma that results in failure to communicate with family and others, make it difficult to care for patients

adequately. Every patient initiated on ARVs should have a family member, preferably a spouse, to be educated, share the burden of the disease, and participate in a supportive way with medication compliance.

- Individuals must learn to anticipate the outcomes of medication — both the side effects and the probable improvement they will experience. Individuals need to know that if they fail to take their medication properly, their life expectancy is 3 to 5 years rather than 10 or more years.

This must be communicated in a way that enables patients to be accountable. Perhaps patients should be tested to ensure that they understand what has been communicated.

- Patients must be seen regularly. At Mulago Hospital we assume that patients should be seen two weeks after starting a new regimen and then at four weekly intervals. This seems to work well for most patients. In most instances it is unwise to give more than four weeks of medication.

In summary, patient participation in their own care through education is the foundation for quality care of all chronic diseases. Patients cannot afford to be ill informed about an illness, which will markedly shorten their life.

The writer is Professor of Medicine at Emeritus University Manitoba, Canada and visiting professor Makerere University, Kampala

Treating tuberculosis in a patient on HIV therapy

By Andrew Kambugu
MBChB, M.Med

A 31 year old housewife and mother of three was diagnosed with pulmonary tuberculosis on the basis of a positive smear and received a successful 8-month treatment course in 2001. In May 2002 she was diagnosed with cryptococcal meningitis and was referred to the IDC following discharge from hospital, principally to obtain fluconazole (diflucan).

At the clinic, she was found to have a CD4 count of 16cells/ml. In addition to fluconazole and cotrimoxazole, she was placed on anti-retroviral (ARV) therapy consisting of d4T, 3TC and nevirapine combo (Trioimmune). Six months later, she felt well, had gained over 10 kgs and her CD4 count was 163 cells/ml. Her viral load was undetectable.

In September 2003 she developed daily fevers and noticed increasing abdominal girth. On clinical evaluation, she was found to have ascites. Abdominal ultrasound confirmed ascites, showed a normal liver with no lymphadenopathy. Liver enzymes were: alk phos of 485, AST 21, ALT 172. Ascitic fluid analysis revealed a protein level of 1200mg/dl and a white cell count of 220 (lymphocytes 80%, neutrophils 20%). Gram and ZN stains were negative and fluid culture did not recover TB or any other organism. A decision was made to start empirical anti-TB therapy. Because she was on Trioimmune, which contains nevirapine, this regimen was stopped. She was not given an alternative ARV regimen due to cost considerations.



WHO/PI-Vict

A tuberculosis patient carried by her two sons in Ethiopia

HIGHLIGHTS

- ARVs interact with many other regimens
- There are limited options for ARVs in sub-Saharan Africa
- Researchers, scientists to pay more attention to what can be done in the event of limited ARV regimens
- In patients on 5 different drugs, 4 of which are known hepatotoxins, are there ways to anticipate if and when they will develop liver toxicity
- Definitive diagnosis of TB is difficult in many instances, even in well-resourced centers.

Two weeks into the anti-TB therapy, she was feeling better and her abdominal girth had reduced. Nine weeks later and still on anti-TB therapy, she presented with jaundice and anorexia. Drug induced hepato-toxicity was suspected and liver enzymes at the time were: AST 460units/L, ALT 95 units/L, alkaline phosphatase >700 unit/L. The clinicians decided to switch her from isoniazid/rifampicin to ethambutol/pyrazinamide. They felt during the continuation phase of therapy for extra-pulmonary TB in which the mycobacterial load is low, the alternative regimen would be adequate.

Two weeks later, her liver

enzymes were markedly reduced (alkaline phosphatase 277 units/L, AST 17 units/L, ALT 70 units/L) and she felt better subjectively.

She was restarted on Trioimmune in January 2004 without incident and her liver enzymes remain in the normal range.

Discussion:

ARVs interact with many other medications, most notably anti-TB drugs. It will be imperative to have a good grasp of such drug interactions to optimise patient care.

This challenge is compounded by limited options for ARV regimens in sub-Saharan Africa due to cost. This case

demonstrates several issues that the clinician is faced with when managing TB in a patient on ARVs: The most readily available and affordable regimen (Trioimmune) contains nevirapine. The serum level of nevirapine is reduced by rifampicin, which is used in combination with other drugs for TB treatment. This effect is through induction of the CYP3A4 system in the liver.

The current recommendation therefore is not to use nevirapine and rifampicin concurrently.

Second, the definitive diagnosis of TB (particularly extra-pulmonary forms as in this case) is difficult in many instances, even in well-resourced centers. The decision to initiate empiric anti-TB therapy is more difficult if the patient is already on a nevirapine-containing regimen. The clinicians' decision to treat was further justified by the clinical response to therapy.

The question of what to do when options for ARV regimens are limited mainly because of costs, deserves attention. In settings where one cannot monitor serum drug levels, should ARVs be withheld, as in this patient, when ARV options are restricted?

Can the decision to stop ARVs be justified when the diagnosis of TB is not definitive as seen in this case? Finally, in patients on 5 different drugs, 4 of which are known hepatotoxins, are there ways to anticipate if and when they will develop liver toxicity, particularly when liver enzyme monitoring in sub-Saharan Africa may be impractical? More questions than answers!

Infectious Diseases Clinic
Mulago Hospital, Kampala

ATIC News

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AA training: A domino effect



GUEST WRITER

Rashida Ferrand
MBBS, MRCP, DTMH

THE ravaging effects of the HIV epidemic in Africa need no mention. One is all too familiar with the devastating social and economic effects of this virus at all levels of society.

The Academic Alliance for AIDS Care and Prevention in Africa (AA), a collaborative effort between Makerere University, Uganda and the Infectious Diseases Society of America runs a training programme for African doctors in the management and care of

HIV, which I attended in February 2004.

The idea of training doctors in HIV is not new in Africa. The AA course includes teaching about clinical management of HIV, its complications and ARV provision, relevant to resource-limited settings and in the African context.

Visits to Mulago Hospital HIV clinic and various specialist clinics, including antenatal clinics implementing prevention of mother to child transmission (PMCT) programmes helps to reaffirm what is learnt in the lecture sessions. Discussions centre on cases seen in the adult and paediatric infectious disease clinics.

There is an opportunity to observe services provided by organisations such as TASO, AIC and Hospice Uganda, involved in the care of people living with HIV/AIDS (PLWHA) and to interact with patients and caregivers in their own

homes, which gives HIV statistics a human face and helps emphasise the need for a holistic approach in tackling this disease.

The course provides teaching on epidemiology and biostatistics, as well as on basic research methods. Research ideas relevant to Africa are encouraged. Students are taught how to review literature critically and access information effectively, a very important tool in keeping up to date with HIV trends and research. Information and training materials are provided through CD-ROMs.

A month later, back at the University of Zimbabwe, where I am a lecturer at the Department of Medicine, the "domino" effect of this course is already at work. The Ministry of Health is keen to train health workers in HIV care in anticipation of greater availability of ARVs in the public

sector. I now find myself in greater demand to train medical students, fellow doctors and nurses in HIV-related disease management, and I regularly draw on the course materials to facilitate this training. With colleagues at the University we plan to organise a formal training course in Harare with the support of one of the AA trainers. The course certainly achieves its aim of "training the trainer".

As a clinician it has filled in my knowledge gaps and improved my practice where over 70% of medical admissions are as a direct result of HIV/AIDS. The visits to HIV clinics in Kampala provided practical insights, relevant as we are in the process of establishing our own clinic at Parirenyatwa Teaching Hospital to provide HIV patient services. The course has also given practical direction to my research aims.

Answers to HIV/AIDS case presentations

CASE No 1: Restart the man on ARVs, with the same drugs and doses as previous. It is possible that some resistant HIV strains have emerged particularly to the NNRTI which has a prolonged half life, but possibly not. Caution the man that it is dangerous to stop treatment for even one day. Monitor his weight and physical condition. Be sure that he will have money to continue buying ARVs.

CASE No. 3: This man with AIDS and tuberculosis first should complete the initial two months of tuberculosis treatment before starting ARVs. A CD4 count would be helpful. Delaying ARVs for two months will simplify the treatment regimen and will not likely compromise the patient's immune status significantly. Selection of the ARV regimen must take consideration of the significant drug interactions between rifampicin containing antituberculosis regimens and many ARVs (see page 7). The man should take cotrimoxazole with the anti-tuberculosis drugs and complete the 8 month programme and continue cotrimoxazole until evidence of return of immunity on ARVs.

CASE No 2: It is possible that this young woman has a primary infection with HIV, which is called the "acute retroviral syndrome." This syndrome commonly presents with symptoms similar to influenza: fever, muscle aches, lymphadenopathy and sore throat. These symptoms also are similar to the symptoms associated with malaria. Moreover, there sometimes is a rash associated with primary HIV infection. At this time, an HIV rapid test will not be helpful because this antibody test will be done in the "window period," before antibody to HIV has had time to develop. Therefore, an HIV rapid test will be negative whether she is infected or not. Nevertheless, during this period, the patient is highly infectious and universal precautions must be strictly observed. Careful questioning of the young woman might reveal that within the past 2-8 weeks she has had sexual encounters which might have provided opportunities to contract HIV. To confirm if the woman has contracted HIV infection, schedule a VCT session for 6-8 weeks hence, when HIV infection should render a positive HIV test result if she is infected.

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