

## Epilepsy & AIDS:

### A deadly combination in resource-poor countries

by Gretchen Birbeck  
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**L**ike most physicians working in Africa, I looked forward to the day that antiretroviral medications would be available to my patients. But I spend much of my time in Zambia caring for people with epilepsy, and paradoxically, the medications available for treating epilepsy here should not be used in combination with the only AIDS treatments available. Who could have anticipated the difficult choices that these life-saving drugs would bring?

I struggle with this reality as I watch Loveness Mwinga exit the HIV Clinic pharmacy and cross the road to enter my sparsely furnished office. She is tired, having walked for three hours to her appointments. The phenobarbitone used to control her seizures has been a lifesaver for Loveness. Before she began treatment, she experienced weekly convulsions, falling backwards with violent, whole body spasms. She would awaken surrounded by cautious observers, urine and feces soaked, humiliated. The bush tea she was given by the traditional healer, though costly, didn't help. Before the phenobarbitone, Loveness lived in constant fear of seizure-related injury and public shame.

When the seizures continued, Loveness' husband relocated her to an

older dwelling some distance from her village. She took her meals alone. She prayed for the fits to stop. It was only after



In Zambia, AIDS patients are treated in clinics separate from regular health care facilities.

she had a seizure while cooking and was admitted to the hospital's burn unit that someone told her there was a medication that could stop the fits. Since beginning treatment, the seizures rarely occur. Her life has transformed. She has been able to move back into the family home. The other villagers smile and laugh with her again. She and her husband are expecting their first child after the harvest.

As part of her antenatal care, Loveness discovered that she carries the HIV virus. She considers herself fortunate that we

have an HIV Clinic here. Loveness' husband, though not willing to come for testing himself, allows her to come for treatment. She now prays that both the seizure medication and the HIV medication, Triomune, will be in stock when she travels to the clinic for her appointments.

What I contemplate as Loveness sits down across from me is the reality that the two medications she has come to collect, phenobarbitone and Triomune, should not be prescribed together. When taken with phenobarbitone, one of the three anti-AIDS drugs contained in Triomune is maintained at too low a concentration in the body to effectively suppress the HIV virus. This provides

the virus an opportunity to develop resistance to this protease inhibitor. In fact, the nevirapine-resistant HIV virus is resistant to all protease inhibitors. So the phenobarbitone-Triomune combination isn't ideal for Loveness, but protease inhibitors are an important component of many AIDS regimens in use. Our global armamentarium of antiretroviral agents is limited even when cost is not an issue. The public health implications of this combination reach far beyond the borders of Zambia.

#### FOR MORE INFORMATION

1. Birbeck G, Chomba E, Ddumba E, Kauye F, Mielke J. Lack of appropriate treatment for people with comorbid HIV/AIDS and epilepsy in sub-Saharan Africa. *Epilepsia*. 2007 Jul;48(7):1424-5.
2. Epilepsy and HIV—a dangerous combination. *Lancet Neurol*. 2007 Sep;6(9):747.

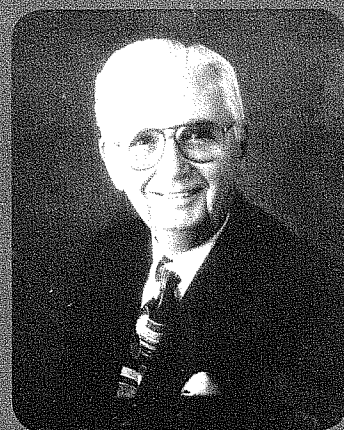
At less than \$5 per person per year, phenobarbitone is the only anticonvulsant that the Zambian public health sector can afford. Triomune is substantially more expensive at approximately \$198 annually, but the second line antiretroviral agent that could be used with phenobarbitone is almost \$500/year and a newer antiseizure medication that would not interact with the AIDS medication is even more expensive. Loveness is not unique. There are 4.6 million people who require antiretroviral treatment in Africa and although exact figures are not available, approximately 42.5 million people in the developing world suffer from epilepsy. The overlap between these groups is not trivial. We see them almost daily in our Epilepsy Clinic.

But what to do for Loveness and her baby? I have only one medication to offer Loveness for her epilepsy. The HIV Clinic here has only Triomune to protect Loveness and her unborn child from the ravages of HIV/AIDS. Shall I safeguard the public good and withhold the epilepsy medication that has so transformed her life? If I do, how long before she is readmitted for seizure-related burns or injuries? Or shall I provide the treatments I have and await the time when Triomune will no longer be effective? I choose to care for the patient in front of me. As Loveness begins her long walk home, I worry about the impact of my decision on her HIV care. And I ruminate on my future, hypothetical patients who will find themselves with a form of HIV that won't respond to key treatments.



Birbeck (front row, left) and her team face major challenges when treating their epileptic patients who are also HIV positive.

## LIFETIME ACHIEVEMENT AWARD



### *Dr. Greenman*

Philip E. Greenman, D.O., was recognized at the American Osteopathic Association's annual convention in San Diego, California, with the prestigious American Osteopathic Foundation (AOF) Lifetime Achievement Award. The AOF Lifetime Achievement Award is a rarely given award recognizing a recipient's sustained commitment to the osteopathic profession. Greenman is only the second person to receive such an award.

Greenman came to MSUCOM in 1972 and served more than 25 years in the college in a variety of roles: as the chairperson for the Department of Biomechanics, associate dean, senior associate dean, and professor for the departments of osteopathic manipulative medicine and physical medicine and rehabilitation. He retired in 1998, but has continued to serve as professor emeritus and as chairperson for several continuing medical education courses.

Greenman's accomplishments have not only influenced MSUCOM, but the osteopathic community as a whole. He was among the first to develop a complete, comprehensive video series on OMT instruction, wrote four books, 10 book chapters, 11 educational modules and innumerable articles, papers and presentations on OMT. He has been recognized worldwide for his expertise in osteopathic medicine, regularly receiving referrals across the globe.