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about HIV/AIDS*

# HIV Clinician

formerly FACULTY NOTES

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## *Is the incidence of hypertension higher in HIV-infected persons on ARV therapy?*

*Marie Anderson, FNP*

The advent of effective pharmacological treatment has resulted in increased years of life for persons infected with HIV. Longer term assessments by their health care providers have revealed patterns of elevated blood pressure in some persons with HIV. The elevated blood pressure patterns seen nationally in persons with HIV correspond to the usual incidence/prevalence of hypertension in the general population.

Yet there is concern by some HIV care providers as to whether the incidence of hypertension may become increased as compared to that of the general population in persons with HIV on antiretroviral therapy. Metabolic complications such as hyperlipidemia and elevated blood glucose (including decreased control of existing diabetes mellitus as

well as new onset diabetes mellitus) in some HIV-infected patients have been associated with antiretroviral therapy. Hyperlipidemia and diabetes have been associated with vascular changes and hypertension in those separate disease states. Theoretically there could be an association between the metabolic complications of antiretroviral therapy and the decreased control of existing hypertension or the onset of newly diagnosed hypertension.

### **Typical HIV and hypertension care scenario**

Many HIV-infected patients have elevated blood pressure upon entry into the HIV care clinic where I work. Commonly, our experience is that the hypertension has not been diagnosed, is not being treated or is being treated sporadically.

*See Hypertension, next page*

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### **Dentistry**

## *Ryan White's impact on access to dental treatment*

*Nicholas Mosca, DDS*

In the 1990s, U.S. health policy achieved an unparalleled milestone when federal legislation appropriated monies to improve access to dental care for those with HIV/AIDS. No other disease or illness received this kind of support from federal health policy makers.

Included under the CARE Act in 1988, the Ryan White HIV/AIDS Dental

Reimbursement Program was designed as a federal-institutional partnership to offset partially the cost of dental services rendered through dental education institutions. From 1991 through 1999, a total of \$57 million was appropriated for this program. Eligible dental institutions receiving reimbursement awards have increased from 56 institutions in 1991 to 101 in 1998. In 1998, reimbursed funds covered approximately

*See Dentistry, page 4*



## Hypertension, from page 1

cally and may not be well controlled. Additionally, due to a multitude of issues including trust, access, transportation, and financial, many of our patients request that their providers in the HIV care clinic become their providers for hypertension as well.

### General hypertension guidelines as related to HIV issues

Primary care providers are aware of the national guidelines for hypertension which are updated regularly and which were presented most recently in the sixth report of the National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure, better known as JNC-6. JNC-6 recommends non-pharmacological therapy initially for the treatment of hypertension, including sodium restriction, decreased alcohol consumption, and other lifestyle changes including diet and exercise. Often a weight reduction of as little as 5 or 10 pounds can reduce blood pressure to an acceptable range. Weight reduction in persons with HIV infection, if judged to be safe, must be accomplished in a reasonably paced manner with adequate nutrition and realistic exercise according to the severity of the HIV condition. JNC-6 states that even with lifestyle changes a majority of patients will still require antihypertensive drug therapy.

JNC-6 defined goals for antihypertensive therapy among patients with combined systolic and diastolic hypertension as a blood pressure below 140/90 mm Hg. More aggressive management

to levels of 130-135/85 mm Hg are being advised for African Americans (and more recently in persons with diabetes mellitus). More aggressive management is also advised for persons with "end-organ" damaging diseases. One could consider HIV/AIDS to be a potential "end organ" disease with its propensity for nephropathy, neuropathy and retinopathy.

*Many clients request that their HIV providers become their hypertension providers as well.*

### Antihypertensive agents with antiretroviral agents

Interactions affecting the metabolism of antiretroviral agents by antihypertensives are of importance to the HIV provider. Antiretroviral medications may accelerate or retard the metabolism of antihypertensives that share the same metabolic pathways of the cytochrome P450 system. P450 cytochromes that are of particular offense are CYP2D6 and CYP3A. Specifically, the clinical effects of antihypertensives, especially calcium channel blockers, should be closely monitored in the person on antiretroviral medication. It is also important to note that certain antihypertensive medications may increase the side effects of antiretrovirals.

### OTC drugs and street drugs

Of interest to the HIV care provider is a recent case report describing a hypertensive crisis

in a physician receiving zidovudine, lamivudine and indinavir chemoprophylaxis following a needlestick injury. Additionally, the physician was taking phenylpropanolamine which is an OTC cold remedy. It is also used in some OTC diet pills. The report's authors speculated on the potential contribution of the antiretroviral medications to the hypertensive crisis.

Currently the FDA is reviewing reports of increased incidence of elevated blood pressure and stroke, particularly in women, related to phenylpropanolamine itself. It is thought that it may be officially removed from the counter in the near future.

HIV care providers should be aware of over-the-counter herbal remedies that have the potential to elevate blood pressure. Ginseng which offers "increased vitality" and is often suggested to persons with HIV has been associated with episodes of hypertension as has Ma-Huang for "energy." Ma-Huang is often the herbal of choice for truck-drivers as it is a natural source of ephedra.

Glycyrrhiza Glabra (licorice) is an herbal expectorant and treatment for gastritis and gastric ulcer. It is also a treatment for viral liver inflammation. Its juice may work as an antiviral agent by means of interferon induction. Glycyrrhiza can increase potassium loss with thiazide diuretics. It also increases the half-life of cortisol which can lead to symptoms of high blood pressure, low serum potassium and edema.

Street drugs can elevate blood pressure. Examples include cocaine and the dexam-



phetamines. This includes crystal meth and some designer drugs.

### Close monitoring

One final challenge to the HIV care provider whose patient also has hypertension is intermittent close monitoring for blood pressure readings, laboratory monitoring, and adverse reaction monitoring related to antihypertensive medications. The patient may not be able to attend extra appointments at the HIV clinic conveniently. We have found that outside assistance can be requested of home visiting nurses, local clinics, local health departments, and local pharmacies. Occasionally family members, friends or community members who are knowledgeable in blood pressure measurement can collect readings for the patient.

It could be that with some knowledge and practice, HIV care providers could become quite good at managing hypertension as well as HIV in their patients. Input from the patients, their families and their communities would assist the HIV provider in this task for the benefit of all concerned. It is yet to be determined if the incidence/prevalence of hypertension will be increased in persons with HIV on antiretroviral agents. ❖

This article was referenced primarily from the following article: Szczech, Lynda Anne. (2000). Hypertension and HIV infection. In J. P. Phair & E. King (Eds.), *Medscape HIV/AIDS Annual Update 2000* (pp. 159-170). New York: Medscape.

*Marie Anderson is an HIV care provider at the Adult Infectious Diseases Clinic at the University of Mississippi Medical Center, Jackson, Mississippi, and adjunct faculty at the University of Mississippi School of Nursing.*

CLIP AND USE AS A POCKET GUIDE

## Antihypertensive Agent Choices in Persons with HIV

**Angiotensin-Converting Enzyme (ACE) Inhibitors:** have specific benefit among patients with diabetes mellitus and other glomerular renal diseases resulting in significant proteinuria. Their utility in slowing the decline in kidney function among patients with HIV-associated nephropathy has been suggested by observational studies. African Americans with lower renin state may not respond well. The adverse effect of chronic cough must not be confused with cough related to HIV conditions. Drug-induced asthma is a potential complication as well.

**Angiotensin II (All) receptor antagonists:** may have similar benefits as ACE Inhibitors without the frequency of chronic cough.

**Calcium Channel Blockers:** may have beneficial effect among patients with glomerular diseases such as diabetes mellitus. Their effect on the progression of renal disease in persons with HIV has not been investigated. They are not associated with hyperlipidemia or insulin resistance and do not interfere with sympathetic function. These agents may be effective particularly in patients with low renin states (African Americans) and elderly patients. These agents must be used with caution with antiretroviral agents, particularly protease inhibitors.

**Beta-Blockers:** the nonselective and beta-1 selective agents may have adverse metabolic effects such as moderate elevation in plasma glucose, increased insulin resistance, reduction in HDL cholesterol, and elevation of triglycerides.

**Diuretics:** may be used as first-line inexpensive agents or to augment the blood pressure control of other agents listed above. Use of these agents requires monitoring of electrolytes and volume status and is associated with adverse metabolic effects including hypokalemia, hyperuricemia, mild elevations in plasma cholesterol and glucose concentrations, and hyperinsulinemia.

*See reverse*

## Warmlines for HIV consultation

Health care providers consult with HIV experts at university medical centers:

- Louisiana 504-568-3369
- Mississippi 601-984-6105
- Arkansas 501-296-1682

National Warmline 800-933-3413 • National PEpline 888-448-4911



CLIP AND USE AS A POCKET GUIDE

### Antiretroviral Interactions with Antihypertensive Medications

AGENT INTERACTIONS WITH ANTIHYPERTENSIVE MEDICATIONS

NRTIs

Abacavir	None significant
Didanosine	None significant. Avoid using with thiazide or loop diuretics due to risk of pancreatitis. Monitor for hyperuricemia when using with diuretics
Lamivudine	None significant
Stavudine	None significant
	Caution using with agents associated with peripheral neuropathy (hydralazine)
Zalcitabine	None significant
	Avoid using with agents associated with peripheral neuropathy (hydralazine)
Zidovudine	None significant

NNRTIs

Delavirdine	Increases plasma concentration of diltiazem, nifedipine
Efavirenz	Monitor clinical effects of calcium channel blockers: verapamil, diltiazem, dihydropyridines
Nevirapine	Theoretical risk with calcium channel blockers: verapamil, diltiazem, dihydropyridines

Protease Inhibitors

Amprenavir	Do not administer with bepridil (Vascor) calcium channel blocker Increased serum concentrations of diltiazem, nifedipine, nicardipine, and nimodipine when coadministered with amprenavir
Indinavir	Interactions with calcium channel blockers and other hepatically metabolized drugs
Lopinavir	Close monitoring with nondihydropyridine calcium channel blockers
Nelfinavir	Increased plasma concentrations of nondihydropyridine calcium channel blockers
Ritonavir	Use extreme caution with agents metabolized by cytochrome P450 enzymes Angiotensin II receptor antagonists and alpha blockers may have increased AUC Beta blockers may have increased AUC Calcium channel blockers may have increased AUC Bepridil: absolute contraindication
Saquinavir	Possible decreased clearance of calcium channel blockers

See reverse

### Dentistry, from page 1

48% of the documented costs of dental care for 66,500 people across 101 institutions.<sup>1</sup> Seventy-nine percent of all dental reimbursement monies have been awarded to institutions in six states (California, Florida, Illinois, Massachusetts, New Jersey and New York), states having geographical areas eligible for Title I funding.

This year marks the tenth anniversary of the Ryan White CARE Act, with over \$6.38 billion dollars appropriated since 1990. What is the impact of this unique program on access to dental treatment since 1991?

Funding for the RW Dental Reimbursement Program became possible as a result of data collected from 1988-1989 on the perceived need for dental care among those with AIDS by Capilouto et al.<sup>2</sup> Barriers to receiving dental care were identified, including some not unique to HIV disease, such as a lack of private dental insurance coverage, and limited availability of publicly supported dental care. In 1991, many people believed that those with HIV experienced discrimination by dentists reluctant to treat them.<sup>3</sup> Additionally, few dentists were knowledgeable regarding the oral and dental conditions associated with T-cell depletion. Since that time, the few published studies that exist on the use of dental services by those with HIV have limited sample size or specific population subsets.

Two recently published studies address the perception of unmet dental needs through accurate population estimates and probability sampling. The authors of both studies review

**HIV/AIDS treatment guidelines...  
available on  
the web at [www.hivatis.org](http://www.hivatis.org)**



perceived unmet dental need using the HIV Cost and Services Utilization Study (HCSUS), a federally sponsored national survey conducted through a cooperative agreement between the Agency for Health Care Policy Research and the RAND Corporation from 1996 through 1998.

### *This year marks the 10th anniversary of the Ryan White CARE Act.*

The HCSUS enrolled a nationally representative sample of persons at least 18 years old with HIV infection who made at least one visit to a non-military, non-prison medical provider, other than an emergency room physician, between January 5 and February 29, 1996. Data was collected through serial interviews of 2864 respondents. Marcus et al found that 58% of patients reported having a usual source of dental care but also learned that 19.3% of HIV-infected medical patients (n=44,550) had a perceived unmet need for dental treatment during the prior six months.<sup>4</sup> Coulter et al concluded that those with a college degree (59.1%) or higher income (49%) were more likely to access dental care than those without a high school degree (31.4%) and lower income (36%) respectively.<sup>5</sup> Additionally, women (35%) were less likely than men (44.4%) to have received dental care in the preceding six months and African-Americans (33.2%) were less likely to have received care than whites (47.9%). Those covered

with Medicaid but living in states without adult dental benefits were four times more likely to have unmet dental needs than those with private insurance. The South reported the highest percentage of unmet dental need (28.1%) with an estimated 23,306 people in need.

This year's Ryan White CARE Act All-Title National Meeting included a presentation by Mantell et al on their evaluation of the RW dental reimbursement program, covering the award period between 1991 and 1996.<sup>6</sup> Data was collected by paper surveys and telephone interviews of 219 dental education institutions eligible to receive RW reimbursement monies, with a response rate of 48%. Sixty-nine percent of the institutions in the total sample reported that HIV/AIDS patients' ability to pay did not determine whether or not they received dental care. HIV/AIDS patients (31%) were more than two times less likely than non-HIV/AIDS patients (51%) to pay for dental services. Approximately half of eligible dental education institutions have participated in the reimbursement program at least once. RW program participation had no perceived effect on the scope of services offered to those with HIV. Many participants in the RW dental reimbursement program actually marketed or advertised services to the HIV/AIDS community, and were more likely to report increases in educational outreach than nonparticipating institutions. Possibly the most valuable outcome of the program may be the number of dental students and residents who received proper training in the management of HIV-related oral disease.

Race, income, exposure group, education, and insurance status appear to impact on an HIV-infected person's ability to access dental services. Evaluation findings from the Ryan White dental reimbursement program may seem optimistic, yet none of the studies presented address the effect of patient transportation and proximity to care for HIV-infected patients that are significant problems in rural states. Additionally, the evaluation of the RW program could not explain the high nonparticipation rate by eligible institutions. Many of these institutions are unable to accept non-paying patients into their programs or can provide only limited emergent dental services. The Ryan White Dental Reimbursement program may have resulted in increased access to care for those living in urban areas, but this impact may not be as significant for the evolving rural population infected with HIV. New strategies to increase access to dental services for those with HIV infection living in states without adequate Medicaid adult dental coverage and having limited access to participating RW institutions should be considered.❖

#### REFERENCES

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- <sup>5</sup> Coulter ID, Marcus M, Freed JR et al. Use of dental care by HIV-infected medical patients. *J Dent Res* 2000;79(6):1356-1362
- <sup>6</sup> Mantell JE, DiVittis AT. Evaluation of the Ryan White HIV/AIDS Dental Reimbursement program. Ryan White All-Title National Meeting. Jan. 18-21, 2000, Washington, DC

*Nicholas Mosca is Associate Professor, Diagnostic Sciences, at the University of Mississippi Medical Center School of Dentistry.*



## SPECIAL SECTION ON KALETRA

### Medicine

## Newest protease inhibitor Kaletra has a unique profile

Mary J. Murphy, MD

Kaletra (lopinavir/ritonavir) formerly known as ABT-378/r is the newest protease inhibitor to be approved by the US Food and Drug Administration. The drug received accelerated FDA approval last fall based on 24 week data from clinical trials showing substantial decreases in HIV viral load.

Kaletra is the first PI to be approved for use in very young children from six months of age. Full approval is pending further review of safety and efficacy data from ongoing Phase III trials.

An ongoing Phase III controlled, prospective, double blind trial is comparing Kaletra/d4T/3TC with nelfinavir/d4T/3TC in 653 antiretroviral naive patients. At 24 weeks, the intent to treat analysis (where patients discontinuing drug for any reason equal treatment failures) showed that 79% in the Kaletra group and 70% in the nelfinavir group had HIV RNA levels <400 copies.

When only patients who remained on treatment were considered, 92% in the Kaletra group compared to 81% in the nelfinavir arm had undetectable viral loads. The discontinuation rate was comparable in the two groups, 14% in the Kaletra arm

and 12% in the nelfinavir arm. In the Kaletra group similar proportions of patients with baseline viral loads greater than and less than 100,000 copies achieved undetectable levels. HIV RNA levels < 50 copies at 24 weeks were seen in 65% of the Kaletra group compared to 60% of the Viracept group.

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*Kaletra is the first PI to be approved for use in children from six months of age.*

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In a smaller Phase II/III controlled study, 70 patients who are single PI experienced and NNRTI naive are receiving Kaletra in combination with nevirapine and two NRTIs. Data through week 72 from the 400/100 dose arm shows that 75% have viral loads < 400 copies and 58% < 50 copies.

In the pediatric population, there is an ongoing trial involving 100 patients between the ages of six months and twelve years. 44% are antiretroviral naive and 56% are experienced. At 24 weeks, 82% of naive patients had HIV RNA levels

<400 copies. Patients in the experienced group are NNRTI naive and are receiving Kaletra in combination with nevirapine and two NRTIs. In this group the proportion of patients achieving undetectable HIV RNA was 66%.

Kaletra is unique in that it takes advantage of the pharmacokinetic-enhancing properties of ritonavir by including the two drugs in the same capsule/solution. Lopinavir is metabolized by the hepatic P450 isoform CYP3A which is inhibited by ritonavir. This results in increased plasma levels of lopinavir. The plasma level of ritonavir remains low. The antiretroviral activity of the drug is due to lopinavir. The mean trough of lopinavir exceeds the IC 50 for wild type virus by 75 fold.

Data on Kaletra-associated resistance mutations and cross resistance is scarce at this time. (See related article on page 8.) Unique mutations conferring reduced susceptibility to Kaletra have yet to be identified. Reduced in vitro susceptibility to Kaletra has been observed in viral isolates containing typical protease mutations such as 82, 84 and 90. The clinical significance of this cross resistance awaits further clarification from ongoing studies.



## SPECIAL SECTION ON KALETRA

Kaletra, like the other PIs, has a number of drug-drug interactions. Concomitant medications that are specifically contraindicated are the same as those for the PI class in general and include rifampin, cisapride, St. John's wort, simvastatin, lovastatin and others. Rifabutin levels are significantly increased by Kaletra and a dose reduction of rifabutin to 150 mg three times a week is recommended.

Higher doses of ketoconazole and itraconazole greater than 200 mg/day should be avoided because serum levels of these azoles are increased by Kaletra. Alternative contraceptive measures to estrogen-based oral formulations are recommended due to decreased levels of ethinyl estradiol. Kaletra oral solution contains 42% alcohol and should not be given with disulfiram or metronidazole.

Kaletra interacts with many of the other antiretroviral drugs. The NNRTIs efavirenz and nevirapine decrease lopinavir levels. In turn, Kaletra increases concentrations of amprenavir, indinavir, nelfinavir and

*Full approval of Kaletra is pending further review of Phase III trials' safety and efficacy data.*

saquinavir. Though dosing adjustments have not been firmly established, some suggested dosing changes are shown in Table I.

The most common side effect experienced by patients taking Kaletra has been mild to moder-

ate diarrhea occurring in 14-24%. Other side effects include abdominal pain, abnormal stools, weakness, headache and nausea and vomiting. About 3% of patients have discontinued drug due to adverse effects in the comparative phase III trial.

PI-associated complications including hyperlipidemia, hyperglycemia, diabetes, and fat redistribution have all been observed in patients taking Kaletra. Pancreatitis, in some cases fatal, has also been noted, though a causal relationship to the drug has not been established. Many but not all patients with pancreatitis had marked triglyceride elevation. Clinicians should suspect pancreatitis in patients with characteristic symptoms and/or elevated amylase/lipase and discontinue any drug, including Kaletra, that may be a contributing factor.

Kaletra is available in a capsule and liquid form. The gel cap contains 133.3 mg of lopinavir and 33.3 mg of ritonavir. The oral solution contains 400 mg lopinavir and 100 mg ritonavir per 5 cc. The recommended adult dose (>40 kg) is 400/100 mg (3 capsules or 5 cc) twice a day. Pediatric dosing is by weight. Kaletra should be taken with food. ♦

*Mary Murphy is Medical Director of the HIV Outpatient Program of the Medical Center of Louisiana at New Orleans.*

Table I

DRUG	EFFECT	DOSE CHANGE
Efavirenz*	Lopinavir	Kaletra: 4 caps/6.5 ml BID
Nevirapine*	Lopinavir	Kaletra: 4 caps/6.5 ml BID
Kaletra	Amprenavir	Amprenavir: 750 mg BID
Kaletra	Indinavir	Indinavir: 600 mg BID
Kaletra	Nelfinavir	Nelfinavir: 750 mg BID
Kaletra	Saquinavir	Saquinavir: 800 mg BID

\*Note that efavirenz and nevirapine may also decrease levels of other PIs



## SPECIAL SECTION ON KALETRA

### Pharmacy

## *Kaletra: applying advances in pharmacokinetics to treating HIV*

*Justina Edmunds-Ogbuokiri,  
RPh, PharmD, FASCP*

First came the nucleoside reverse transcriptase inhibitors, followed by the protease inhibitors. Now scientists are applying advances in the understanding of the pharmacokinetic characteristics of these agents in creating teams of double or triple agents in hopes of improving their ability to eradicate the HIV virus.

Kaletra, a combination product that was recently granted accelerated approval by the FDA, combines an older protease inhibitor, ritonavir and a novel PI, lopinavir, and is the result of one such endeavor.

Manufactured by Abbott Laboratories, Kaletra is indicated in the treatment of HIV infection in adults and children six months and older in combination with other antiretroviral agents.

The reason for combining these two agents is mostly to take advantage of their favorable pharmacokinetic interaction: lopinavir needs ritonavir to achieve optimal bioavailability.

This interaction between the two agents is based on the fact that lopinavir is essentially metabolized by CYP3A and ritonavir is known to inhibit

CYP3A, thereby slowing the metabolism of lopinavir and thereby increasing its plasma levels. The amount of ritonavir in Kaletra is too low to exert any significant antiretroviral activity; in this instance, it simply acts as a metabolic enhancer.

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*Clinicians in the  
nation's larger clinics  
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Kaletra in heavily  
pre-treated patients.*

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### **The place of Kaletra in treatment of HIV disease**

According to the manufacturers, Kaletra has very broad utility: it can be used in treatment-naïve as well as in treatment-experienced patients, achieving a response rate of 65% to 85% in patients who have failed at least one PI in clinical trials.

Experienced clinicians in some of the nation's larger HIV clinics seem to be using Kaletra in heavily pre-treated patients.

In clinical trials with Kaletra, in patients new to

antiretroviral therapy, Kaletra in combination with stavudine (Zerit, d4T, Bristol-Myers-Squibb) and lamivudine (EpiVir, 3TC, Glaxo Wellcome) reduced HIV RNA levels to below detectable levels in 79% of patients, compared to a reduction in 70% of patients achieved by a combination of nelfinavir with D4T and 3TC.

In phase II/III open-label studies with Kaletra in combination with other antiretroviral agents, in both treatment-naïve and treatment-experienced patients, the new product maintained viral suppression through 72 weeks of observation.

### **Resistance and cross-resistance with Kaletra**

The manufacturers of Kaletra acknowledge that Kaletra shares the same amino acid substitutions in isolates that are resistant to the protease inhibitors; however, because the product achieves such high drug concentrations, it eradicates with a potency that is at least 10 times greater than other PIs. It can therefore, for the most part, overcome resistance.

The most commonly-reported Kaletra-related side effects of moderate severity



## SPECIAL SECTION ON KALETRA

include abdominal pain, abnormal stools, diarrhea, fatigue, headache, nausea and vomiting. The product labeling on Kaletra contains warnings and precautions similar to those of the older PIs, including reports of fat redistribution, hyperglycemia and diabetes, as well as an increase in the risk of bleeding in hemophilia. Pancreatitis and abnormal liver function tests have been reported in patients on Kaletra.

(See "Tips To Optimize Therapy with Kaletra" in adjacent box.)❖

*Justina Ogbuokiri is Assistant Professor of Clinical Pharmacy at Xavier University of Louisiana College of Pharmacy, and Consultant Clinical Pharmacist at the HIV Outpatient Program, Medical Center of Louisiana at New Orleans.*

### TIPS TO OPTIMIZE THERAPY WITH KALETRA

- Kaletra is available in capsule and liquid formulations. The recommended adult dose is 400/100 mg (equivalent to 3 capsules or 5.0 ml) taken twice daily with meals. The dose of Kaletra in children between the ages of 6 months and 12 years is based on their body weight.
- Patients do not have to refrigerate Kaletra if it is used within two months and stored below 77°F.
- While in the pharmacy, Kaletra should be stored at 36°F to 46°F until dispensed.
- Co-administration of Kaletra with drugs that are highly dependent on CYP3A or CYP2D6 for their metabolism and for which elevated plasma concentrations are associated with toxicity and/or serious and/or life-threatening adverse events is contraindicated.
- When co-administered with didanosine (Videx, ddl, Bristol-Myers), didanosine should be taken one hour before or two hours after Kaletra.
- When co-administered with sildenafil (Viagra, Pfizer), patients should be warned of the possibility of adverse events, including increased blood pressure, priapism and visual changes.
- Patients taking oral contraceptives should be cautioned to use additional protection during therapy with Kaletra.
- As is the case with all of the protease inhibitors so far, patients concomitantly taking St. John's wort and other OTC medications are encouraged to report this to their provider or pharmacist.

## Plan ahead to attend HIV conferences...

▲ 8th Conference on Retroviruses and Opportunistic Infections  
Dates: February 4-9, 2001  
Location: Chicago, IL  
Phone: (703) 535-6862  
Email: info@retroconference.org

▲ 3rd European Symposium on the Clinical Implications of HIV Drug Resistance  
Dates: February 23-25, 2001  
Location: Frankfurt, Germany  
Phone: +44 20 7398 0700  
Email: frankfurt@intmedpress.com

▲ 13th National HIV/AIDS Update Conference -- AIDS Treatment and Care: Translating Progress into Practice

Dates: March 20-23, 2001  
Location: San Francisco, CA  
Phone: (514) 874-1998  
Email: nauc@total.net

▲ 14th International Conference on Antiviral Research  
Dates: April 8-13, 2001  
Location: Seattle, WA  
Phone: (202) 331-2000  
Email: kgillesp@courtesyassoc.com

▲ Fifth International AIDS Malignancy Conference  
Dates: April 23-25, 2001  
Location: Bethesda, MD  
Phone: (301) 496-6711  
Email: jquinn@mail.nih.gov

▲ 11th Annual Clinical Care Options for HIV Symposium  
Dates: May 31-June 3, 2001  
Location: Franklin, MA  
Phone: (888) 391-3996  
Email: registration@imedoptions.com

▲ 11th Symposium on HIV Infection  
Dates: June 14-16, 2001  
Location: Toulon, France  
Phone: +33 1 4747 5737  
Email: bettina.albine@wanadoo.fr

▲ International HIV Workshop on Management of Treatment-Experienced Patients  
Dates: September 19-21, 2001  
Location: Chicago, IL  
Email: mtepp@us.intmedpress.com



## Psychosocial

# Assessment is an important tool in providing caregiver support

Valerie Gordon-Garofalo, MSW, PhD

Before initiating any psychosocial treatment procedures or devising intervention plans, social workers, case managers, and other mental health providers must understand the problems caregivers face, using assessment procedures such as interviewing and questionnaires. Focusing on the circumstances surrounding the caregiving role, they should “begin where the client is.” Examining common areas of concern for HIV/AIDS caregivers (such as fear of transmission, role change, control issues, isolation, multiple loss, and anticipatory grief) is recommended, but the providers should realize that not every caregiver faces every issue or encounters them in the same way. Along with exploring these common concerns, clinicians and clients together may wish to explore (1) client strengths, (2) coping mechanisms, (3) support systems and family characteristics affecting the experience, (4) the health status of the loved one who has HIV disease, and (5) feelings about seeking professional help.

### Client strengths and resources

The “strengths perspective” emphasizes indigenous client assets, capacities, and strengths, incorporating them into treatment. Such an emphasis is empowering and builds client confidence, encouraging a caregiver to use resources and strengths he or she already has. Strengths to consider during assessment include: (a) personal characteristics, attitudes, and capabilities, such as intellect, respect in the community, motiva-

tion, willingness to seek support, and personal ethics; (b) education and employment history, qualifications, benefits, and entitlements; (c) health and physical capabilities: emphasize what clients can do, instead of dwelling on what they can't; and (d) financial and physical resources: housing, transportation, savings, sources from which to borrow money (Kirst-Ashman & Hull, 1993).

### Coping responses

Because past behavior is the best predictor of future behavior, clinicians should ask, “how have you handled problems and stresses in the past?” They can then incorporate these coping strategies into treatment planning, matching interventions to client capacity and to specific caregiver situations.

Problem-focused coping, which is used to change the person-environment relationship producing stress, is appropriate when situations are changeable. It includes problem-solving, decision making, and ameliorating behaviors such as conflict resolution, time management, and information gathering. When situations are unchangeable, emotion-focused coping is appropriate, as it helps ease discomfort brought about by the person-environment relationship through efforts to change the meaning of a stressful situation. It also includes denial and efforts to escape or ease stress by using drugs or alcohol. Problem and emotion-focused coping can be mutually facilitative; however, since ineffec-

tual coping of one type may also hinder the other type of coping, it is necessary to evaluate the clients' skills in both areas (Folkman & Lazarus, 1980; Folkman, Chesney, McKusick, Ironson, Johnson, & Coates, 1991).

### Social support

It is vital to assess the social support network available to caregivers, as well as to evaluate what the caretaker is doing to care for him or herself. Practitioners must also assess clients' capacity to use available resources, which is influenced by socio-economic status, educational level, and sometimes by institutional discrimination. Some caregivers are well-connected to support resources, involved in religious or cultural groups or neighborhood programs that meet many of their needs, but others are not. Many have a strong network of friends and family, but few, if any, people with whom they can talk about being in a relationship with someone who has HIV disease. To overcome feelings of isolation, most want to be with others who understand what they are going through and with whom they can talk about issues related to their loved ones (Gordon-Garofalo, 1999).

### Illness factors

A practitioner cannot understand a caregiver's problems without knowing the medical condition of his or her loved one. It is helpful to ask how and when the loved one became infected, what treatment options have been



explored, what the current prognosis is, and what “stage” of illness the person living with HIV/AIDS (PLWH) is experiencing. Also helpful is asking about the PLWH’s current level of physical, cognitive, social, and emotional functioning. The answer to these questions may shed light on the caregiver’s adjustment in relation to one or more of the common problem issues.

### Views of the helping process

Maxmen and Ward (1995) recommend examining clients’ attitudes about helping professionals and the helping process before treatment planning. Some clients distrust helping professionals, based on previous experiences with persons in authority, keeping the social worker or mental health provider at a psychological distance. In such instances, the clinician should not be overly probing, as clients may see such behavior as “playing with their heads,” and instead suggest a trial period for treatment and being there as a friend or source of support, without attempting a formal assessment until the client is ready. By contrast, some caregivers may tend to view helping professionals as omnipotent, and clinicians can become overwhelmed by their needs. Helping clients to prioritize and maintaining appropriate boundaries are important in such instances.

### Assessment in crises

When a client is in significant distress, clinicians should focus on the specific event leading to crisis and the crisis itself. Clients are not able to think clearly if emotional reactions are profound. It is important to find out what recently happened that caused the caregiver distress enough to seek

treatment. In other words, “why now?” The social worker must quickly evaluate the present situation’s impact on the client, his or her ability to deal with it, and what support he or she has from others.

Oftentimes clients may cope adequately with an overarching stressor, such as providing care to a loved one with HIV disease. This overarching stressor, though, can make the caregiver more vulnerable to stress, and events that might not otherwise pose a threat can become crises. Affecting caregivers’ reactions to the caregiving role and discreet events that take place within that role, too, are relationship and communication patterns; belief systems; personality issues, culture, and background; socio-economic status and access to (and ability to use) outside resources; prior losses; and aspects of diversity such as heritage, skin color, language, assimilation/acculturation, membership in an oppressed group, age, disability status, and sexual orientation. ♦

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- Valerie Gordon-Garofalo is Director of the Gary Lloyd Institute for Research and Training in HIV/AIDS Social Work, and an Assistant Professor at the Tulane University Graduate School of Social Work.*

## Highlights from two new draft guidelines

On October 30, the CDC announced the availability of two draft documents for public comment: “Revised Guidelines for HIV Counseling, Testing, and Referral” and “U.S. Public Health Service (USPHS) Recommendations for HIV Screening of Pregnant Women.”

In making the announcement, Dr. Helene Gayle made the following comments about the documents: “The recommendations in the current draft ‘Revised Guidelines for HIV Counseling, Testing, and Referral’ reflect new advances which have occurred during the last six years in the areas of HIV counseling, testing, and referral, including the following findings:

- High-quality HIV prevention counseling models are effective in changing behaviors and reducing the incidence of sexually transmitted diseases (STDs) in HIV-uninfected persons at increased risk
- HIV treatment has been found to be effective in slowing the progression of HIV infection and improving the health of many HIV-infected persons and quality and duration of life
- Therapy has been shown to dramatically reduce the risk of perinatal HIV transmission
- New HIV testing technologies are increasingly available that will simplify testing and allow for more rapid availability of test results
- New or updated guidelines on partner counseling and referral services, prevention case management, prevention and control of STDs, and prevention of opportunistic infections have been published.

“The resulting guidelines presented in the draft ‘Revised USPHS Recommendations for HIV Screening of Pregnant Women’ differ from the 1995 guidelines in the following ways. The draft guidelines:

- Emphasize HIV testing as a routine part of prenatal care and strengthen the recommendation that all pregnant women be voluntarily tested for HIV
- Recommend a simplification of the testing process so that previously required pretest counseling is not a barrier to the provision of testing
- Make the consent process more flexible to allow for various types of informed consent
- Recommend that providers explore and address reasons for refusal of testing
- Place more emphasis on HIV testing and treatment at the time of delivery for women who have not received prenatal testing and chemoprophylaxis.”

For a full version of Dr. Gayle’s announcement and the revised guidelines go to: [www.cdc.gov/hiv/frn.htm](http://www.cdc.gov/hiv/frn.htm)

Source: AETC National Resource Center email announcement



## Stay current with the latest HIV/AIDS journal articles

▲ "Control of Viremia and Prevention of Clinical AIDS in Rhesus Monkeys by Cytokine-Augmented DNA Vaccination," *Science* 2000;290:486

▲ "Predicting HIV RNA Virologic Outcome at 52-Weeks Follow-Up in Antiretroviral Clinical Trials." *JAIDS* 2000;24:433

▲ "Clinical Implications of Identifying Non-B Subtypes of Human Immunodeficiency Virus Type 1 Infection," *CID* 2000;31:798

▲ "Weight Loss and Wasting Remain Common Complications in Individuals Infected with Human Immunodeficiency Virus in the Era of Highly Active Antiretroviral Therapy," *CID* 2000;31:803

▲ "Intermittent Interleukin-2 Therapy on Plasma and Tissue Human Immunodeficiency Virus Levels and Quasi-Species Expression," *JID* 2000;182:1063

▲ "The Effect of Potent Antiretroviral Therapy and JC Virus Load in Cerebrospinal Fluid on Clinical Outcome of Patients with AIDS-Associated Progressive Multifocal Leukoencephalopathy," *JID* 2000;182:1077

▲ "Evaluation of the Abbott LCx HIV-1 RNA Quantitative, a New Assay for

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▲ "Immune Control of HIV-1 After Early Treatment of Acute Infection," *Nature* 2000;407:523

▲ "Discontinuation of Mycobacterium avium Complex Prophylaxis in Patients with Antiretroviral Therapy-Induced Increases in CD4+ Cell Count: A Randomized, Double-blind, Placebo-Controlled Trial," *Ann Intern Med* 2000; 133:493

▲ "Cluster of HIV-Infected Adolescents and Young Adults - Mississippi, 1999," *MMWR* 2000;49:861

▲ "A Trial of Shortened Zidovudine Regimens to Prevent Mother-To-Child Transmission of Human Immunodeficiency Virus Type 1," *NEJM* 2000; 343:982

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▲ "Differences Between Women and Men in Adverse Events and CD4 Responses to Nucleoside Analog Therapy for HIV Infection," *JAIDS* 2000;24:316

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NEW ORLEANS, LOUISIANA  
*A preceptorship for NPs, PAs, RNs: Comprehensive Nursing Management of the HIV Disease Continuum—May 14-16, 2001. 23 Contact Hours. Contact: Dana Gray, 504-568-6792 or dgray@lsuhsc.edu*

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LSU—Delta Region AIDS Education & Training Center  
1542 Tulane Avenue  
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Executive Editor and Project Director  
Jane E. Martin, MA, RN, C-FNP

Project Coordinator  
Deirdre Danahar, MSW, MPH, LCSW

Editor  
Toni Newton

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