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HIV/AIDS: Implications for Older Adult Patients

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Of the 1.2 million Americans infected with HIV in 2011, more than 300,000 (26%) were 55 years of age or older. The CDC estimates that in the near future, half of all adults living with HIV will be 50 years old or older.

Screening

Missed opportunities for preventing and detecting HIV infection in older adults occur because the older population has traditionally not been identified as an at-risk group. At-risk behaviors that carry risk of HIV transmission, however, occur in older adults as well as in traditional younger high-risk groups. In addition, some older adults have undiagnosed HIV infection based on risks incurred at an earlier age, including men who have had unprotected sex with men, men and women having unprotected heterosexual intercourse, and past injection drug use.

In response to the estimated 200,000 HIV-infected individuals in the US who do not know they are infected, the Centers for Disease Control and Prevention (CDC) revised its screening guidelines in 2006, recommending a one-time screening of all adults up to age 64, regardless of risk factors. Beyond that, annual screening is recommended for all adults, including those 65 and older, if they have ongoing risk factors.

To make testing more accessible and feasible in busy health care settings, “opt-out testing” is the recommended approach to routine screening. This means HIV testing is a part of routine care, unless a patient refuses (“opts-out of”) testing.

Delayed Diagnosis

When older Americans are diagnosed with HIV infection it is often later in the course of infection. Late diagnosis places patients at significant risk of immunosuppression,

opportunistic infections, other complications of HIV, and death. Challenges to diagnosis include difficulty in recognizing symptoms and signs of chronic HIV/AIDS, which can mimic those typically associated with aging (Table 1). Keeping HIV in the differential diagnosis when older adults have these symptoms is important for timely diagnosis and will remain critical to improving outcomes through earlier treatment.

| | | |
|----------|---------------|----------------------|
| Dementia | Herpes Zoster | Weakness and Fatigue |
| Frailty | Pneumonia | Weight Loss |

Higher Rates of Chronic Disease

Recent research also highlights that older HIV patients, as compared with their non-infected peers, suffer higher rates of chronic diseases traditionally associated with older age such as cardiovascular disease, cancers of all types, renal insufficiency, hepatic disease, and cognitive deficits. In addition, metabolic disorders such as diabetes and dyslipidemia may occur due partly to the chronic inflammatory state caused by HIV infection, as well as immune deficiency and toxicity of chronic antiretroviral medications.

Higher Rates of Drug Side Effects

Older patients are at particular risk of side effects from antiretroviral drugs because of interactions with medications used to treat other chronic illnesses (Table 2), age-associated declines in kidney and liver function, and changing proportions of body fat to muscle mass. Dose adjustments are often needed.

TIPS FOR DEALING WITH HIV IN OLDER ADULTS

- Don't forget that nearly 1 out of 5 cases of HIV occur in adults over the age of 50.
- Screen all adults once for HIV, regardless of age, or on an annual basis if they have ongoing HIV risk factors.
- Be alert for signs and symptoms of HIV, which can be similar to those that occur in older individuals without HIV infection: fatigue, dementia, herpes zoster, pneumonia, weight loss, and weakness.

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Progress

When the HIV epidemic was recognized in the 1980s, its first decade marked devastation for patients diagnosed with HIV. At initial diagnosis patients had already suffered years of immunocompromise, presented with late-stage complications, and succumbed to the disease a relatively short time after diagnosis.

We have come a long way since those days and now, in the era of “highly active antiretroviral therapy,” HIV has become a manageable and treatable chronic illness, with near-normal life expectancy. With more widespread awareness and earlier diagnosis, older patients can lead healthy lives with a life expectancy that closely approaches that of their un-infected peers.

Table 2. Interactions Between Commonly Prescribed Medications and Drugs for Treatment of HIV

| Common Medications | PIs or cobicistat | NNRTIs | INSTIs | Comment |
|--------------------------------------|-------------------|-------------------|--------|--|
| Statins | ++ | ++ | ++ * | Lovastatin and simvastatin contraindicated with PIs and cobicistat. Use fluvastatin, pravastatin, low-dose atorvastatin instead. |
| Proton Pump Inhibitors (PPI) | ++ atazanavir | ++ rilpivirine | | Do not exceed omeprazole 20 mg/d (or equivalent) with atazanavir/ritonavir in PI- naive patients; PPI contraindicated with rilpivirine |
| H2-blockers | ++ atazanavir | | | Adhere to H2-blocker dose limits with atazanavir—see package insert |
| Antacids | ++ atazanavir | ++ | ++ | Adhere to dose separation of ARVs with antacids—see ARV package inserts. |
| Antidepressants | + | + | | Antidepressant levels may increase or decrease with PIs. Titrate antidepressant dose to clinical efficacy or safety. |
| Benzodiazepines | ++ | | ++ * | Midazolam or triazolam contraindicated with most PIs and cobicistat. |
| Antiarrhythmics/other cardiac agents | ++ | | ++ * | Ranolazine contraindicated with PIs and cobicistat regimens. Dronedaronone contraindicated with PIs. |
| BPH medications | ++ | | ++ | Alfuzosin contraindicated with PIs and cobicistat regimens. |
| Diltiazem and dihydropyridine CCBs | ++ | | + | Decrease diltiazem dose by 50% when co-administered with atazanavir/ritonavir. Most PIs increase CCB levels; use with caution. |
| ED agents | ++ | | ++ * | Adhere to dose limits of ED drugs if given with PIs or cobicistat. |
| Ethinyl estradiol (EE) | + | + | | EE levels can decline; use dose titration for hormone replacement. |
| Fluticasone, budesonide | ++ | | + * | Avoid co-administration with PIs and cobicistat regimens if possible. |
| Warfarin, apixaban, rivaroxaban | + | | + * | Monitor INR closely with warfarin; avoid co-administration of PIs and cobicistat with apixaban, and rivaroxaban |
| Antiplatelets | ++ | ++ | + * | Avoid co-administration of vorapaxar and ticagrelor with PIs and/or cobicistat-containing regimens. Avoid coadministration of etravirine and clopidogrel |
| Rifamycin | ++ | ++ | ++ | Rifampin contraindicated with PIs and some NNRTIs, rifapentine contraindicated with all ARVs except NRTI class. |
| St. John's Wort | ++ | ++ | | Not recommended with PIs and NNRTIs |
| Anti-seizure meds | ++ | + | + | Monitoring levels of anticonvulsant and PI or NNRTI may be needed. |

Abbreviations: PI = protease inhibitors, NNRTI = non-nucleoside reverse transcriptase inhibitor, NRTI = nucleoside reverse transcriptase inhibitor, INSTI = integrase strand-transfer inhibitor, CCB = calcium channel blocker, ED = erectile dysfunction, ARV = anti-retroviral

*Refers only to cobicistat- or ritonavir-boosted elvitegravir

NOTE: Nucleoside reverse transcriptase inhibitors (NRTIs) are not included on the table because there are no important interactions between NRTIs and commonly prescribed medications.

References and Resources

Center for Disease Control: <http://www.cdc.gov/hiv/topics/over50/resources.htm>
 Center for Disease Control: Revised Recommendations for HIV Testing of Adults, Adolescents, and Pregnant Women in Health-Care Settings <http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5514a1.htm>
 AIDS Education and Training Center: Drug-Drug Interactions with HIV-Related Medications. http://aidsetc.org/aidsetc?page=cm-312_drug

Interprofessional care improves the outcomes of older adults with complex health problems

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