Frequent False-Positive Drug Tests With Efavirenz Users

May 21, 2009

Ninety-eight percent of people with HIV on a regimen containing efavirenz (found in Sustiva and Atripla) tested false positive for benzodiazepines—prescription sedatives—on a widely used drug test, according to study results published online in Clinical Infectious Diseases. These data suggest that clinicians and others who order routine testing for illicit drug use need to use extra caution when interpreting the results involving people using efavirenz.

Researchers have previously reported that random urine drug testing of people taking efavirenz sometimes results in a false-positive result for marijuana use. Though a more specific test for the active ingredient in marijuana can reveal that people aren’t actually using the drug, this has sometimes led to complications for people who must be tested for illicit drug use, such as for their jobs or as a requirement of their parole. Until now, however, there have been no studies showing that efavirenz could result in a false-positive result for benzodiazepines—including drugs such as Valium (diazepam) and Ativan (lorazepam), which are commonly abused by people with substance-use disorders.

Antje Blank, MD, from the University Hospital Heidelberg in Germany, and his colleagues decided to study the problem after several of their patients tested positive for benzodiazepines on the commonly used Triage 8 drug screen, but were not taking the drugs. All were on a regimen containing efavirenz. They enrolled 100 HIV-positive patients, half of whom were on an efavirenz regimen and half who were not. All of the patients were screened using several of the most widely used urine drug tests, including the Triage 8, the Drug Screen Multi 5 and the Drug Control 008A444.

Blank’s team found efavirenz resulted in a false positive for benzodiazepines 98 percent of the time. All 50 of the people on an efavirenz regimen tested positive for benzodiazepines on the Triage 8 test, compared with only one of the people on a non-efavirenz regimen. Forty-six of the people taking efavirenz also tested positive for benzodiazepines on the Drug Screen Multi 5 test. Subsequent screenings with a more sensitive test revealed that only one of the 50 was actually taking benzodiazepines. The team found no false positives for marijuana.

“Because efavirenz is an antiretroviral drug that is often given to HIV-infected patients,” the authors conclude, “it is therefore of utmost importance that clinicians and patients know about this cross-reactivity to avoid incorrect consequences after false-positive urine drug screening test
results.”