Contraceptive Patch No Better Than Pills for Interaction Problems With Protease Inhibitors

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A patch that delivers hormonal contraceptives through the skin (transdermal) has just as much of a drug interaction problem with protease inhibitors (PIs) as oral versions of the birth control drugs, according to a study published in the December 1 issue of the *Journal of Acquired Immune Deficiency Syndromes*.

Many HIV medications can affect the blood levels of oral contraceptives, particularly Norvir (ritonavir)–boosted PIs. Most of the prescribing instructions for these antiretrovirals (ARVs) recommend an alternative form of birth control given that the PIs can significantly lower contraceptive blood levels.

Contraceptive drugs are also available in transdermal patches. Sometimes the chance of drug interactions can be reduced when the contraceptive is administered via skin applications instead of by mouth. However, no studies have been done to determine whether transdermal patches are any better than oral contraceptives when combined with PIs.

To test this, Mary Vogler, MD, from the Weill Cornell Medical College in New York City, and her colleagues conducted a study of 32 HIV-positive women, eight of whom were taking Kaletra (ritonavir-boosted lopinavir) and 24 of whom were not taking Kaletra. All of the women were given a single dose of oral contraceptives, followed 48 hours later by three weeks of transdermal patch contraceptives. Each patch lasted for seven days. Contractive blood levels, both ethinyl estradiol (EE) and norelgestromin (NGMN)—the combination of contraceptives in the pills and patches—were checked multiple times over the first 48 hours after the oral dose, and then at 12 to 48 hours, 48 to 72 hours and seven days after administrating each patch.

Vogler and her colleagues found that EE blood levels were about 50 percent lower in women taking Kaletra—both from the oral dose and the patch—than in women not taking Kaletra. Conversely, NGMN levels increased by more than 80 percent. Both types of oral contraceptives affected blood levels of the lopinavir and the ritonavir in the Kaletra by about 20 percent.

“An ongoing effort to investigate potential interactions between the next generations of contraceptive agents and both the current and next generations of [ARV therapy] is crucial to

preserve the overall health of HIV-infected women, prevent pregnancy and inadvertent maternal to child transmission of HIV, and to allow family-planning when women's health has been optimized in the presence of HIV," the authors concluded.

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