Postexposure HIV Regimens in Kids Reviewed

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FROM AN ANNUAL CONFERENCE ON PEDIATRIC INFECTIOUS DISEASES

VAIL, COLO. — A 5-year-old boy finds a used condom in the park. He decides that it would be a really cool balloon, so he puts it in his mouth and tries to blow it up.

Should he receive HIV postexposure prophylaxis or not?

How about prophylaxis for a 3-year-old girl with an accidental fingerstick from a needle she found while playing in a park? Or for an 18-month-old girl in a homeless shelter who reached under a sofa cushion and discovered treasure in the form of an old tampon with dried blood on it, which she promptly put in her mouth? Or a 3-year-old boy who cut himself on the cheek while pretending to shave with a used razor belonging to his HIV-positive uncle?

In a recent study of 274 pediatric patients with community-acquired needlestick injuries, 82 received postexposure prophylaxis, but no seroconversions occurred in any of the 274 patients.

The pediatric infectious diseases staff at the Children's Hospital, Denver, has encountered all of these situations. Those clinicians recommended HIV postexposure prophylaxis in only one of these four situations: the boy who sustained a large laceration while he was playing with his HIV-positive uncle's razor, Heather R. Heizer said at the conference, which was sponsored by the hospital.

That is consistent with a generally conservative approach to postexposure prophylaxis that prevails among the hospital's infectious diseases staff. That stance is based upon the intervention's substantial financial cost, significant toxicities, and a complete absence of pediatric clinical trials data that might help guide clinical decision making, explained Ms. Heizer, who is a physician assistant and instructor in pediatrics at the hospital and the University of Colorado, Denver.

When the Denver pediatric infectious diseases staff does offer HIV postexposure prophylaxis following nonsexual, nonoccupational exposures, the favored approach—based largely upon studies done in animals—is a triple-drug antiviral regimen that is prescribed for 28 days, but only if it can be started within 72 hours of the exposure, she continued.

In children younger than age 13 years who may have difficulty swallowing pills, the staff generally uses 28 days of zidovudine (Retrovir), lamivudine (Epivir), and Kaletra (a combination of lopinavir plus ritonavir), because all are available in liquid formulations.

Older children receive Combivir (zidovudine plus lamivudine) and Truvada (tenofovir plus emtricitabine), or Combivir plus Kaletra.

HIV transmission requires exposure to an infectious body fluid (defined as blood, breast milk, semen, or vaginal secretions) through broken skin or mucous membranes. Saliva, tears, and urine are considered noninfectious unless blood is visibly present.

The half-life of HIV in serum is about 1.2 days; the virus can survive only for about 6 hours extracellularly.

Returning to her specific case exam-

Spanish-Language Shingles Fact Sheet

The National Institute on Aging's newest Spanish-language fact sheet, "Vivir Mejor la Tercera Edad: La culebrilla," describes shingles, risk factors for the disease, prevention tips, and treatment to relieve symptoms. It also offers a list of resources. For information call 800-222-2225 or visit www.nia.nih.gov/healthinformation/publications/spanish/shingles-sp.htm, which offers an option for English. ■

ples of potential HIV exposure, Ms. Heizer said that the pediatric infectious diseases staff declined to offer prophylaxis to the young girl in the homeless shelter with the bloody tampon. The tampon was old and the blood was dried, she explained, making for an extremely low HIV transmission risk.

Similarly, the boy with the "balloon" was deemed at very low risk because the condom was old and dried out, with no visible blood or semen.

The girl who stuck herself with a needle that she found in a park was not offered postexposure prophylaxis, Ms. Heizer explained, because there was no visible blood in the needle, the park wasn't thought to be a hangout for injection drug use, and exposure to discarded needles is generally thought to carry a low risk of transmission for HIV.

That last point was demonstrated in a classic study of 308 children who were exposed to discarded needles and were subsequently tested for HIV: Not one case of transmission occurred (Pediatrics 1999;104:318-24).

More recently, pediatricians in Montreal reported on 274 patients with community-acquired needlestick injuries. In all, 82 received postexposure prophylaxis, of whom 69 completed the 4-week treatment course.

No seroconversions occurred in any of the 274 patients, confirming that the transmission risk is quite low, Ms. Heizer noted.

She found that study particularly useful because it paints a picture of situations in which accidental pediatric needlesticks are most likely to occur, and to whom.

About 29% of the needlesticks happened in a street or alley, and another 24% occurred in a park. The patients' mean age was 7.9 years. Nearly two-thirds of the injuries occurred in boys. In 65% of the injuries, the child purposely picked up the needle.

A particularly gratifying study finding was that three-quarters of the children with community-acquired needlestick injuries were brought to medical attention on the day of the injury (Pediatrics 2008;122:e487-92). ■

Disclosures: *Ms. Heizer reported having no financial conflicts regarding her presentation.*