

## Medicine by John Grauerholz, M.D.

### Just a touch of blood

*The Centers for Disease Control has again proved itself impartial—willing to risk anyone's life.*

As was inevitable the Atlanta Centers for Disease Control was recently forced to report three cases of health care workers who were infected by skin contact with blood from AIDS-infected patients. Just as inevitably, CDC officials downplayed the significance of the cases and even managed to throw in an argument against AIDS testing for hospitalized patients, thus demonstrating their impartiality: They are just as willing to risk the lives of fellow health care professionals as those of the general public.

In the first case, a female health-care worker in an emergency room applied pressure to a needle puncture site to stop bleeding during an attempted cardiac resuscitation. During the procedure, she may have had a small amount of blood on her index finger for about 20 minutes before washing her hands. Afterwards, she may also have assisted in cleaning the room, but did not recall any other exposures to the patient's blood or body fluids. She had no open wounds, but her hands were chapped. She was not wearing gloves during this incident.

The patient died and an autopsy examination identified *Pneumocystis carinii* pneumonia, and a blood sample was positive for HIV antibody by enzyme immunoassay (EIA) and Western blot methods.

Twenty days after the incident, the health-care worker became ill with fever, myalgia, extreme fatigue, sore throat, nausea, vomiting, diarrhea, a 14-pound weight loss, and generalized lymphadenopathy which her physician diagnosed as a viral syndrome. That illness lasted three weeks. She had donated blood eight months be-

fore the incident and was negative for HIV antibody by EIA. She donated again 16 weeks after the incident and was positive for HIV by EIA and Western blot.

In the second case, a female phlebotomist was drawing blood from an outpatient with a suspected HIV infection when the top of the tube flew off and blood splattered around the room, on her face, and in her mouth. She was wearing gloves to protect her hands, and was wearing eyeglasses, so she did not think she got any blood in her eyes. She had facial acne but no open wounds. She washed the blood off immediately after the exposure.

The outpatient's blood sample was positive for HIV antibody by EIA and Western blot, and a hepatitis B surface antigen test was negative. The phlebotomist's EIA was negative the day after the incident and again eight weeks later.

When she donated blood nine months after the exposure, she was positive for HIV antibody by EIA and Western blot. She presently has no symptoms. She denied having any sexual contact during the previous two years, ever using drugs intravenously or ever receiving a transfusion. She has not had any needle-stick injuries in two years.

In the third case a female medical technologist was operating an apheresis machine (a device to separate blood components) in an outpatient setting. While attempting to correct a problem that developed during the procedure, blood spilled, covering most of her hands and forearms. She was not wearing gloves. She does not recall having any open wounds on her

hands or any mucous-membrane exposure. However, she had dermatitis on one ear and may have touched it. She washed the blood off herself and the machine several minutes after the spill.

The patient undergoing the apheresis had denied risk factors for HIV infection. However, a blood sample from the patient was positive for HIV antibody by EIA and Western blot the next day. The technologist's HIV-antibody tests were negative five days and six weeks after exposure. Eight weeks after the exposure, she had a flu-like illness with fever, myalgia, diarrhea, hives, and a blotchy red rash on her arms and legs. This illness resolved after a few weeks. Three months after the incident, she was positive for HIV antibody by EIA and Western blot.

Despite efforts by the CDC to downplay the significance of these rare cases, the fact remains that three people are now documented to have become infected by touching infected blood, without any needle-stick injury. Since there is evidence that superficial skin cells can be infected by HIV there is nothing intrinsically surprising about these cases. The potential for transmission by skin contact with infected body fluids exists and, as the infection continues to spread in the population, such cases will occur with increasing frequency, in spite of the denials of the CDC.

This is the most probable explanation of the case in Dusseldorf, West Germany, in which infection was transmitted from a transfusion-infected child to his uninfected brother by skin contact with saliva.

The continuing failure of the CDC and other agencies to confront the growing evidence of casual transmission will have a growing body-count associated with it.