Watch for Sepsis From Contaminated Platelets

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ways consider the possibility of bacterial contamination of blood products—particularly platelets—in patients who experience a febrile reaction to a transfusion, the Centers for Disease Control and Prevention advised.

Transfusion-associated bacterial sepsis is the second most frequently reported cause of transfusion-related mortality in the United States, accounting for 17% of 277 reports from 1990-1998, the CDC said (MMWR 2005;54:168-70).

Platelets are particularly vulnerable, because they are stored at room temperature for up to 5 days, whereas other blood components are refrigerated or frozen. An estimated 1 in 1,000-3,000 platelet units are contaminated with bacteria, resulting in life-threatening sepsis in 1 of every 100,000 transfusion recipients and immediate death in 1 of every 50,000 recipients.

These risks are higher than those estimated for transfusion-associated viral infections such as hepatitis C virus or HIV—yet are still likely to be underestimated because bacterial infections attributed to contaminated platelets are underreported, the CDC said.

To reduce this risk, AABB (formerly the American Association of Blood Banks), adopted a new standard in March 2004 requiring member blood banks and transfusion services to implement measures to detect and limit bacterial contamination in all platelet components. Additional guidance for implementation of the standard—aimed at clinicians as well as institutions—was issued in February 2005. It is available at www.aabb.org.

A survey conducted last summer by the Infectious Diseases Society of America (IDSA) suggested that awareness of the problem and adherence to the new standard was not high.

The survey was distributed to all 870 infectious-disease consultant members of IDSA’s Emerging Infections Network. Of the 399 who responded, only 36% reported being aware that bacterial contamination of platelets was one of the most common infection risks of transfusion therapy, and only 20% indicated having been familiar with the new AABB standard prior to participating in the survey. Once informed, 90% believed that health care providers should be aware of the standard.

The CDC cited case reports that illustrated the need for awareness and rapid diagnosis of transfusion-associated infections, because false negatives—leading to fatal bacterial sepsis—can occur even when pre-transfusion testing complies with the new standard.

In one case, a 74-year-old man with leukemia died of sepsis 21 days after receiving a pooled platelet transfusion. The pooled unit had been tested with a reagent strip to determine pH, a means of detecting bacteria. Even though the sample was in the accepted range, the patient’s blood cultures following transfusion grew Staphylococcus aureus. Although pH tests are an option under the AABB standard, they are less sensitive than culture-based methods. However, even culture-based testing can fail to detect bacterial contamination.

The outcomes should stimulate discussion among health care experts about expedited sex-partner treatment, especially in the face of rising rates of chlamydia, azithromycin was given. In the standard-referral group, patients were advised to tell their partners to seek care, available at no cost at the STI clinic.

The primary outcome was persistent or recurrent gonorrhea or chlamydia infection. Attempts were made to interview all subjects 10-18 weeks after treatment. Urine samples were tested for chlamydia and gonorrhea.

► Results: A total of 2,751 patients were randomized. Among the 912 patients assigned to expedited treatment who were retested and reinterviewed, 71.5% (647) agreed to give medication to at least one partner. 50% of the patients with gonorrhea, azithromycin was given. In the standard-referral group, patients were advised to tell their partners to seek care, available at no cost at the STI clinic.

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