Watch for Sepsis From Contaminated Platelets

BY MIRIAM E. TUCKER
Senior Writer

Always consider the possibility of bacterial contamination of blood products—particularly plate-lets—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 reported transfusion deaths during 1990-1998, the CDC said (MMWR 2005;54:168-70).

Platelets are particularly vulnerable to bacterial growth 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 500,000 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 of 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. But, 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 pretransfusion 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. ■

OraQuick Test Boosts HIV Seropositivity Rate

WASHINGTON — The first 1,000 uses of the OraQuick Advance Rapid HIV-1 Antibody Test in New Jersey identified nearly double the number of HIV-positive patients, compared with the traditional blood tests, Evan Cadoff, M.D., wrote in a poster presented at the annual meeting of the American College of Preventive Medicine.

However, the data represent rates of seropositivity, not necessarily rates of new HIV infections, wrote Dr. Cadoff of the University of Medicine and Dentistry of New Jersey.

The test requires an oral fluid sample, rather than a blood sample, and delivers results in 20-40 minutes.

Rapid testing in New Jersey began in November 2003 at publicly funded counseling and testing sites throughout the state. After the first 1,000 results, the seropositive rate increased to 4.72%, almost double the 2.36% seropositive rate recorded with traditional testing during the previous year.

Overall, 63% of the people who tested positive had not previously been diagnosed with HIV. However, whether the numbers represent improved detection rates in previously targeted at-risk populations or new groups of patients who previously went untested remains uncertain, the investigators noted.

—Heidi Splete

MINDFUL PRACTICE

Expedited Partner Treatment for STIs

BY JON O. EBBERT, M.D., AND ERIC G. TANGALOS, M.D.

The Problem

A 19-year-old sexually active female presents with 3 days of vaginal discharge and dyspareunia. The exam is unremarkable except for a friable cervix, and the urine screen is positive for chlamydia. She is angry and thinks this came from her partner.

The Question

In sexually active female patients with a sexually transmitted infection (STI), does offering treatment for the likely infectious partner sight unseen decrease recurrence of the STI in your patient, compared with asking the patient to refer the partner for treatment?

The Search

We used PubMed (www.pubmed.gov) and entered "partner treatment AND chlamydia," limiting the search to randomized controlled trials.

Our Critique

The evidence suggests that expediting treatment of partners decreases the likelihood of persistent infection or reinfection in the proband. One of the most interesting findings is the 50% reduction in reports by patients in the expedited-treatment group of having sex with a partner that they believed had not been treated, compared with the standard referral group. One could hypothesize that expedited treatment obligates a type of "directly observed therapy" of infected partners by patients, without which patients may be less likely to engage in sexual relationships with these individuals.

The outcomes should stimulate discussion among health care experts about expedited sex-partner treatment, especially in the face of rising rates of chlamydial infection. Some state prescribing statutes require a relationship with the treatment recipient, as well as adequate prescription documentation. Practitioners need to weigh the risk of failing to comply with these laws against the potential benefits of offering expedited treatment; one such benefit is the prevention of future infections that could lead to pelvic inflammatory disease in our female patients.

Patient Preferences & Clinical Decision

You write a prescription for antibiotics for your patient and wonder if you should give her another prescription for her partner.

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M R. Golden et al.

Effect of expedited treatment of sex partners on recurrent or persistent gonorrhea or chlamydial infection. N. Engl. J. Med. 2005;352:676-85.

► **Design and Subjects:** This randomized trial was conducted in King County, Wash., (greater Seattle area) from 1998 to 2003. Women and heterosexual men diagnosed with gonorrhea or chlamydia infection were identified through laboratory reporting, case reports from health care providers, and on-site case ascertainment. Subjects were excluded if they could not be contacted within 14 days of initial treatment.

► **Intervention:** In the expedited-treatment group, patients were offered medication to give to up to three partners. Also, study staff offered medication to partners they contacted themselves because subjects were unwilling or unable to contact their partners. "Partner packets" were distributed to patients or their partners through commercial pharmacies, the Public Health–Seattle and King County (PHSKC) clinic, or direct mailing. For subjects with gonorrhea, a single 400-mg dose of cefixime and 1-g sachet of azithromycin were given. For patients with 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.

► **Outcomes**: 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% (647) agreed to give medication to at least one partner. Gonorrhea or chlamydia infection was significantly less common at follow-up among patients in the expedited-treatment group than among patients in the standard-referral group (relative risk 0.76; 95% confidence interval 0.59-0.98). Expedited treatment of partners was associated with a 73% reduction in the presence of gonorrhea (3% vs. 11%; $P = .01$) but only a 15% reduction in chlamydial infection (11% vs. 13%; $P = .17$) at follow-up. An elevated risk of infection at follow-up was significantly associated with standard referral of partners as well as younger age, initial chlamydia infection (vs. gonorrhea alone), diagnosis at a public health clinic other than an STI clinic, non-Hispanic ethnicity, any sex since treatment, and greater numbers of sex partners with whom the patient had any unprotected vaginal sex since treatment. Infection was also more likely among individuals having sex with a partner whom the patient believed was not very likely either to have been treated or to have tested negative for STIs and with reporting that not all of one's partners had been treated. In the expedited-treatment group, infection at follow-up was more common among those who did not obtain medication for partners after agreeing to do so, or who notified their partners more than 7 days after their own treatment.