Drug Monitor

ONLINE EDITION

Locking Out Bacteria

How effective is an antibiotic lock—instillation of a concentrated antibiotic-anticoagulant solution into the catheter lumens during the interdialytic period—at treating *Enterococcus* catheter-related bacteremia (CRB)? Expanding on prior research completed at their facility, investigators from the University of Alabama, Birmingham evaluated the outcomes of 64 patients who were undergoing hemodialysis and had vancomycin-sensitive *Enterococcus* CRB.

In the prior study, researchers treated 12 patients who developed vancomycin-sensitive *Enterococcus* CRB while undergoing hemodialysis with three weeks of systemic vancomycin and gentamicin in conjunction with a vancomycin-gentamicin-heparin catheter lock. Blood cultures from five of the patients (42%) grew *Candida* species within one week of treatment completion. Speculating that the complication was due to prolonged exposure to broad-spectrum antibiotics, investigators in the current study revised the protocol to use vancomycin alone with a vancomycin-heparin lock.

Of the 64 patients in this study, 39 (61%) achieved a clinical cure. Of the 25 patients whose treatment failed, 10 had fever after 48 hours and had to have their catheters removed and 15 had recurrent bacteremia within 90 days. Additionally, one case of endocarditis and three cases of osteomyelitis developed. Three of these complications were detected within one week, which suggests they would have occurred regardless of the treatment strategy, the researchers say.

Second infection occurred in two (5%) of the 39 patients who achieved a clinical cure with the antibiotic lock and in eight (32%) of the 25 patients who experienced treatment failure. In one of these 10 patients, the infecting organism was *Candida* species.

The researchers say that the cure rate in their study was higher than that previously observed at their institution for *Staphylococcus aureaus* CRB (41%) but lower than those found for gram-negative CRB (87%) and *Staphylococcus epidermis* CRB (75%).

Source: *Am J Kidney Dis.* 2009;53(1):107–111.

Arimidex, Tamoxifen, and Adverse Events

Results of the Arimidex, Tamoxifen, Alone or in Combination (ATAC) trial indicated that arimidex was associated with significantly less predefined gynecologic adverse events (AEs) than tamoxifen (including vaginal bleeding and discharge and endometrial cancer) in postmenopausal women with localized early breast cancer who were followed for a median of 5.6 years. To further compare AEs of these drugs, researchers from St. James's University Hospital, Leeds; Christie Hospital NHS Trust, Manchester; Wolfson Institute of Preventive Medicine, London; and University College London, London, all in Great Britain, and Universitätsklinikum, Dresden, Germany retrospectively compared the incidence of gynecologic AEs not predetermined in the ATAC trial, as well as the number of gynecologic interventions performed.

In all, 1,057 gynecologic AEs occurred in 3,094 women taking tamoxifen and 634 occurred in 3,092 women taking arimidex (34% versus 21%; $P < .0001$). About 3.8% of the AEs in the tamoxifen group were considered serious drug-related events, compared with 0.6% of the AEs in the arimidex group.

For those women in the tamoxifen group with an intact uterus at baseline (n = 2,236), the drug was associated with excess events of vaginal hemorrhage, leukorrhrea, endometrial issues (carcinoma, disorder, hyperplasia, and neoplasia), uterine disorder and neoplasia, cervical neoplasia, cervicitis, ovarian carcinoma, and vaginal disorder. For women in the arimidex group with an intact uterus at baseline (n = 2,229), the drug was associated with excess events of dyspareunia and ovarian disorder. The majority of the AEs experienced in both groups occurred in the first 2.5 years of therapy.

The researchers found that certain symptoms (pain, vaginal hemorrhage, and leukorrhea) were investigated more often in the tamoxifen group, which led to more interventions in this group. Twice as many women taking tamoxifen had oophorectomy (50 versus 23 women taking arimidex), and hysterectomy was performed close to four times more often in women taking tamoxifen than in women taking arimidex. In both groups, approximately three quarters of the hysterectomies were related to benign diagnoses.

Tamoxifen, an estrogen agonist, has been considered the standard adjuvant treatment in postmenopausal women with hormone receptor–positive breast cancer, the researchers say. But they conclude that their results corroborate the "wealth of evidence" provided by the ATAC trial showing that arimidex, a nonsteroidal aromatase inhibitor, is the more effective and better tolerated treatment.

Source: *Am J Obstet Gynecol.* 2009;200(1):80.e1–80.e7. doi:10.1016/j.ajog.2008.07.062.