Antibiotic Prophylaxis Discouraged Before Surgery

BY SHARON WORCESTER
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ORLANDO — Most dermatologic surgery patients don't need perioperative antibiotics, and the routine use of antibiotics to prevent surgical site infection or infective endocarditis should be discouraged, Dr. Steve Spencer said at the annual meeting of the Florida Society of Dermatologic Surgeons.

Healthy individuals, those who undergo surgery of a clean site, and those who undergo procedures of limited duration typically do not need prophylactic antibiotics. As for determining which patients do need prophylaxis, a number of variable risk factors should be considered, including HIV-positive status, chronic immunosuppression, age, occupation, and temperature/humidity, all of which could affect infection risk, said Dr. Spencer of Port Charlotte, Fla., noting that these are gray areas that require individualized decision making.

It is clearer, however, that those who are immunocompromised; those undergoing surgery of riskier areas such as the mouth, groin, or axillae, or sites that are already infected; and those who are at high risk of infective endocarditis (see sidebar) should receive prophylaxis, he said. Dr. Spencer cited guidelines on prevention of infective endocarditis published by the American Heart Association last year (Circulation 2007;116:1736-54).

Although the guidelines mainly address dental issues, the AHA noted that infectious endocarditis is more likely to result from frequent exposure to random bacteremias associated with daily activities than from bacteremia caused by dental or medical procedures and that prophylaxis is likely to prevent a very small number of cases of infectious endocarditis, if any.

The guidelines also point out that the risks of antibiotic prophylaxis in terms of adverse events exceed the benefits, if any, from antibiotic prophylaxis and recommend that only those with the highest risk of adverse outcomes from endocarditis should undergo antibiotic prophylaxis.

As for procedures on infected skin, skin structures, or musculoskeletal tissue, the AHA noted that, while these infections are typically polymicrobial, only staphylococci and β-hemolytic streptococci are likely to cause infective endocarditis. Therefore, when antibiotic prophylaxis is needed, the drug selected should target the most likely organisms to be encountered and be given prior to the procedure.

Broad-spectrum antibiotics—most often first-generation cephalosporins—are commonly used to treat these species.

Semisynthetic penicillinase-resistant penicillins are good for gram-positive cocci, *Klebsiella*, *Escherichia coli*, and *Proteus* organisms. Clindamycin is an alternative option in penicillin-allergic patients. Erythromycin is almost never used because it is associated with very high staphylococcal resistance, Dr. Spencer said.

Clindamycin also is a good option for patients undergoing surgery of the oral mucosal areas, but cephalosporins may have less cross-reactivity in penicillin-allergic patients. Although trimethoprim-sulfamethoxazole coverage is similar to these, with excellent gram-positive coverage, it does not provide *Pseudomonas* coverage, he added.

When antibiotic prophylaxis is determined to be necessary, it should be delivered 30-60 minutes before surgery. Since surgical factors are at least as important for preventing infection, sterile techniques and proper sterilization of instruments, avoidance of excess tension on closures, avoidance of excessive suture material, and avoidance of charring also require careful attention, he said. ■

Conditions With Endocarditis Risk

The American Heart Association guidelines state that the following cardiac conditions have the highest risk of adverse outcomes from endocarditis:

- ► Prosthetic cardiac valve.
- ► Previous infective endocarditis.
- ► Congenital heart disease.
- ► Unrepaired cyanotic CHD, including palliative shunts and conduits.
- ► Completely repaired (with prosthetic material or device) congenital heart defect during first 6 months after the repair.
- ► Repaired CHD with residual defect (at or adjacent to the site of the prosthetic patch or device) that inhibits endothelialization.
- ► Postcardiac transplant cardiac valvulopathy.

CO_2 Ablation/Curettage Proves Successful in Darier's Patient

BY SHARON WORCESTER
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ORLANDO — CO_2 laser ablation with aggressive curettage proved successful for the treatment of a patient with Darier's disease who had failed other medical therapies.

The CO_2 laser/curettage approach was initially used on one part of the patient's abdomen, and the results compared favorably with results following wire brush dermabrasion on another part of her abdomen, reported Dr. Tri H. Nguyen at the annual meeting of the Florida Society of Dermatologic Surgeons.

The resulting scars have proved to be a 'much better alternative' to the hyperkeratotic Darier's lesions.

DR. NGUYEN

The areas looked similar postoperatively, with erythema appearing on the CO_2 laser-treated area at short-term follow-up, and the beginning of hypertrophic scarring in the dermabraded area (this resolved with flurandrenolide tape). The erythema resolved over time.

The patient was greatly affected by this "horrible" disease, said Dr. Nguyen, associate professor of dermatology, and director of Mohs micrographic and dermatologic surgery at the University of Texas M.D. Anderson Cancer Center, Houston. She had chronic maceration, malodor, repeat infections, and mastitis, and her daily activities were restricted by her symptoms.

After successfully treating a number of cases of Hailey-Hailey disease with the CO_2 laser/curettage approach, Dr. Nguyen thought it might prove useful in this patient since both diseases require treatment that produces lesion destruction and scarring to achieve long-lasting remission.

She had failed numerous other therapies, including systemic and topical antibiotics, topical retinoids, and laser treatments.

The CO_2 laser/curettage treatment was performed under tumescent anesthesia; the patient also received oral anxiolysis with lorazepam and oral oxycodone and acetaminophen (Percocet). The CO_2 laser was used on continuous wave mode at up to 40 W. Sometimes 15-20 W were used, but Dr. Nguyen said he never went below that setting on the first pass "because the plaques were so hyperkeratotic."

The skin was treated in a grid pattern to ensure uniformity.

Based on the initial success, the patient was treated subsequently on other areas where she experienced the most difficulties with symptoms, malodor, and infection. The resulting smooth, flat scars which fade from the initial erythema into hypo- or depigmented scars have proved to be a "much better alternative" to the hyperkeratotic Darier's lesions, he said. The patient has been extremely satisfied with the results, and has returned repeatedly for treatment of additional areas.

Dr. Nguyen had no relevant conflicts of interest to disclose. ■

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