

# MRSA Decolonization Warranted During Outbreak

BY SHARON WORCESTER  
Southeast Bureau

DESTIN, FLA. — The prevention of recurrence in patients presenting with methicillin-resistant *Staphylococcus aureus* skin infections may require decolonization of certain skin surfaces, Dr. Dirk M. Elston said at a meeting sponsored by the Alabama Dermatology Society.

In fact, with MRSA outbreaks, the decolonization of carriers—who typically comprise at least a third, if not most, of the affected population—is warranted, he said.

Although most carriers will not become infected, there are no good data to help determine which individuals should or should not be treated. In cases of a neonatal ICU outbreak, for example, all of the babies might be colonized, and perhaps only one will become sick—but that one might die as a result.

Moist skin surfaces are typically the areas of concern. In addition to the nares,

which are the most common areas for MRSA carriage, the axilla, groin, and perianal areas also are typical areas of carriage. The hands in patients with eczema or fissures, and areas such as legs that are shaved and develop folliculitis or have nicks also are high-risk areas and should be targeted for decolonization.

Oral and intravenous antibiotic treatments don't reach areas such as axillary and groin surface skin, so topical treatments typically are required to eradicate skin surface carriage in those areas, said Dr. Elston, director of the department of dermatology at Geisinger Medical Center, Danville, Pa.

Evidence-based recommendations on the best decolonization strategies are lacking, but there is evidence to support some approaches. In vitro data suggest that zinc may interfere with bacterial adherence, thus a product such as the ZNP bar—a soap containing 2% pyrithione zinc—may be helpful, but clinical studies of this approach are needed.

"Failing that, bleach baths are still great," Dr. Elston said. Two tablespoons (about 2 capfuls) in a bathtub filled with water is sufficient. Up to ¼ cup can be used, but skin peeling or irritation may occur at this dose. The optimal frequency for bleach bathing has not been established, however. Recommendations can range from weekly to daily. Products containing 10% benzoyl peroxide are another inexpensive alternative that can be used on the skin instead of bleach, he added.

Other topical products that may be useful for MRSA decolonization of the non-nares skin surface areas include chlorhexidine topical antiseptic (Hibiclens) and antibacterial products containing triclosan, which is found in a number of common products, Dr. Elston noted.

As for nares decolonization, mupirocin, which has long been used for this purpose, is losing efficacy because of increasing resistance. Published clearance rates are below 30%—not bad, but not great, he said,

suggesting that another topical should be used as a replacement for mupirocin or in conjunction with it. Fusidic acid is one option, and among newer agents is retapamulin, which is expensive, but thus far, typical MRSA strains in the United States remain susceptible to this drug.

"This is probably better than mupirocin for the nose," said Dr. Elston, noting that that MRSA decolonization of the nares is an off-label use for this drug.

Tea tree oil also appears to be an effective option for MRSA decolonization. Soaps and creams containing tea tree oil were shown in at least one study to be as effective as a number of antibiotic drug treatments for decolonization when used in the nares—at far less expense.

Research has shown that towels and bar soaps, which are frequently shared among children in families, and even among athletes in the locker room, are the most common sources of MRSA transmission, and sharing should be discouraged. ■

## Watch Dermatomyositis Patients for Cancers and Organ Involvement

BY NANCY WALSH  
New York Bureau

VIENNA — Adult patients who are diagnosed with dermatomyositis should have a thorough work-up for malignancy because they are at heightened risk for various cancers, Dr. Ralph M. Trueb said at the 16th Congress of the European Academy of Dermatology and Venereology.

About 15%-30% of patients with this inflammatory autoimmune disorder will develop cancer, with the risk being most prominent early in the course of disease. Most reported malignancies are carcinomas rather than sarcomas or lymphomas, said Dr. Trueb of the University Hospital of Zurich.

The work-up should include a chest radiograph, Pap smear, and breast and rectal examinations, and should be repeated at regular intervals, he said.

Patients are also at risk for potentially life-threatening organ involvement. The lung is involved in 40% of these patients, with the development of aspiration pneumonia, interstitial fibrosis, and respiratory insufficiency. The joints, gastrointestinal tract, and cardiovascular system also can be affected. More than one-fourth of patients have arthritis, and electrocardiogram abnormalities are present in half of patients.

The condition also may be limited to the skin or muscles. The skin lesions typical of dermatomyositis can be classified as pathognomonic, characteristic,

or compatible, Dr. Trueb said.

Pathognomonic findings include Gottron's papules, which are slightly elevated violaceous papules located over the joints of the hands, as well as over the ankles, knees, and elbows, and Gottron's sign, which refers to the erythematous plaques that spare the interphalangeal spaces.

"It's important to note that, while the skin lesions in dermatomyositis can resemble those seen in lupus, they are located over the joints in dermatomyositis and primarily between the joints in lupus," he said.

Characteristic skin findings include a heliotrope periorbital rash with or without associated periorbital edema; the "shawl sign," which is a symmetrical macular violaceous erythema at the nape of the neck and around the shoulders; and scalp involvement, including alopecia.

Compatible findings include poikiloderma, especially in longstanding disease, and calcinosis.

Muscle manifestations include progressive weakness, electromyographic changes, and elevations of muscle enzymes such as creatine kinase. "Patients lose the ability to raise their arms for hair grooming or shaving," Dr. Trueb said. They may subsequently become unable to climb stairs, to rise from a sitting position, or to walk unaided. Patients with severe muscle involvement have a poor prognosis, he said.

First-line treatment remains high-dose oral corticosteroids, but this is evolving, with increas-

ing reports of the use of intravenous immunoglobulin (IVIg) and the biologic drugs, he said.

In one series, eight patients with dermatomyositis or polymyositis who had not responded to corticosteroids, IVIg, and immunosuppressants received a tumor necrosis factor inhibitor. Six of the eight showed improvements in muscle strength and fatigue and marked reductions in creatine kinase (*Ann. Rheum. Dis.* 2006;65:1233-6).

The B-cell-depleting monoclonal antibody rituximab also has now been used in a small number of patients with refractory disease. In an open-label pilot study that included six patients who each received four infusions of rituximab, muscle strength improved 36%-113% over baseline, beginning as early as 12 weeks after the initial infusion (*Arthritis Rheum.* 2005;52:601-7).

In a more recent report describing three patients whose cutaneous lesions responded well to rituximab, researchers from Australia suggested a possible mechanism by which this drug might act in dermatomyositis. They noted that B lymphocytes are not present in the skin lesions in this disorder, and that T cells predominate in areas of skin changes. They suggested that the drug may affect T cells as well as B cells, possibly through downstream effects on costimulatory molecules that inhibit activation and development of T helper type 1 cell dominance (*J. Am. Acad. Dermatol.* 2007;56:148-53). ■

## Community Approach Is Best in Promoting Kids' Sun Protection

LOS ANGELES — It takes a multi-pronged approach to prevent a child from getting sunburned, the results of a randomized trial of sun protection strategies suggest.

An intervention group of children in the sixth to eighth grades—a time when youths usually increase their sun exposure—in 10 New Hampshire towns were matched with grade-equivalent controls and monitored for 2 years, during which time they received sun safety information (*Pediatrics* 2007;119:e247-56). Study patients randomized to the control group showed a 23% decrease in sun protection during that time, but the level of sun protection decreased by only 8% in towns randomized to a multifaceted intervention.

The children in the intervention group "avoided a majority of the drop-off of sun protection that happens in those middle-school years," Dr. Martin A. Weinstock noted at the annual meeting of the Society for Investigative Dermatology.

The investigators targeted communities with populations of 6,000-34,000. They observed children at lakes and other recreational areas, noting whether the kids played in the shade and wore protective clothing, and how much of their skin was covered. They asked the children whether they were using sunscreen—if the answer was yes, then they asked to see the container.

Using these elements, the researchers created a measure of

the percentage of body surface protected. "It was a fairly objective measure of what sun protection these kids were using," said Dr. Weinstock, professor of dermatology and community health at Brown University, Providence, R.I. He was not an investigator in the study, but disclosed that he has been a consultant to sunscreen manufacturers. The intervention in the study group reflects a growing understanding that changing behavior requires more than printing a booklet on sun protection or developing a curriculum for teachers, he said.

The investigators went to schools, recreational facilities, primary care practices, and other venues to encourage sun-safe behavior messages from teachers, coaches, lifeguards, clinicians, and others. They trained teen peer counselors to promote the delivery of sun protection messages.

The middle-school students in the intervention group "heard it from their parents, from their teachers, from their doctors—they heard it from everybody," Dr. Weinstock said. "For long-term benefit, we need to take the type of approach that's informed by these recent results." The primary change in the children's behavior was in sunscreen use.

Sun protection in childhood is a complex goal that needs to be balanced with the need for physical activity and healthy vitamin D levels. Even if an intervention improves sun exposure, it will take many years to show it reduces melanoma incidence, he said.

—Sherry Boschert