Topical Calcineurin Inhibitors Can Still Be Used in Children

**BY ROBERT FINN**

San Francisco Bureau

**Blaine, Wash.** — Topical calcineurin inhibitors remain an excellent second-line treatment for atopic dermatitis in children, despite a public health advisory from the Food and Drug Administration earlier this year and the promise of a black-box warning in the near future, Robert Sidbury, M.D., said at a conference sponsored by the North Pacific Pediatric Society.

Dr. Sidbury, of the University of Washington, Seattle, addressed the questions of when and how to use the topical calcineurin inhibitor (TCI) tacrolimus (Protopic) and pimecrolimus (Elidel) for atopic dermatitis in light of the FDA warning. TCIs should be used only for short-term or intermittent long-term treatment, he said. They should not be used continually on large body-surface areas, or on children younger than 2 years of age except in unusual circumstances.

“If I felt that an infant was using so much topical steroid that I was worried, I would use a TCI in a heartbeat, and with the clearest conscience that I know how to have,” Dr. Sidbury said.

TCIs seem to work best on skin folds and on the head and neck. These happen to be the areas where the use of topical steroids is most problematic, since thinning of the skin is a well-known side effect of these agents. Additionally, topical steroids may promote the growth of hyperkeratotic areas such as those seen in palmoplantar hyperkeratotic areas such as those seen in palmoplantar hyperkeratosis.

In a study from Sheffield (England) Children’s Hospital, a specialist dermatology nurse spent at least 40 minutes demonstrating how to apply topical therapy and offering general eczema education to the families of 51 children with poorly controlled atopic dermatitis. Lessons were reinforced by the nurse at subsequent visits (Br. J. Dermatol. 2005;153:582-9).

Within 1 year, eczema severity had declined 89%, attributable to a remarkable 800% increase in the use of emollients. There was no overall increase in the use or potency of topical steroids. Dr. Krol suggests giving parents tangible concrete advice.

For example, Dr. Krol draws on a study from Wales in prescribing topical medications according to fingertip units. The medications can be easily squeezed onto a parent’s pointer finger, to ensure that they are applying a proper amount (Br. J. Dermatol. 1998;138:293-6).

At another recent meeting, Alfred Lane, M.D., cited the same Sheffield Children’s Hospital study and explained how its principles can be applied to emollients.

He instructs families to use petroleum jelly according to the size of the jars. Parents of a 4- or 5-year-old should be using a 14-ounce tub every other week, he said.

“Try to talk [teenaged patients] into using a pound a week,” said Dr. Lane. Patients and parents of atopic dermatitis patients they’ve used, Dr. Lane said at the annual meeting of the California Society of Dermatology and Dermatologic Surgery. Other educational messages are vital to convey as well. These include:

- **Topical dermatitis is not a food allergy.** Many children with eczema have IgE antibodies to molds, pollens, and grasses, and they may have food allergies as well. Parents should be clear about the fact that their children’s eczema is not caused by what they eat.

Dr. Lane described an infant who developed zinc deficiency and severe protein malnutrition when an older foster mother accepted a naturapath’s advice to limit the child’s diet to goat’s milk and rice milk in the belief that everything else was worsening the child’s atopic dermatitis. He emphasized that extreme diets do not improve eczema and may pose serious risks to children.

- **Topical steroids are not what’s worrying Congress and major league baseball.** The word steroid brings to mind oversized muscles, “roid rage,” and testicular shrinkage. Physicians should not assume that parents understand that there is a difference between the substances that are banned in competitive sports and the medicines prescribed for atopic dermatitis.

- **Emollients don’t have to be fancy to work.** “There’s certainly nothing cheaper and nothing as nonsensitizing as petroleum jelly,” Dr. Krol said.

He advises parents to apply it within 1 minute of bathing, all over a child’s body before swimming, and over the perioral area before and after feeding a baby who has atopic dermatitis.

- **Bathing is good. Sponging is bad.** A 15- to 20-minute, not-too-hot daily bath followed by a coating of petroleum jelly is beneficial for atopic dermatitis.

“Sponging is the worst thing for a child’s skin,” Dr. Krol explained. “It chaps it, encourages microfissures, and worsens eczema,” he said.