Pediatric Dermatopathologist Fills Niche

BY SHERRY BOSCHERT

SAN FRANCISCO — As director of the University of Colorado Hospital's dermatopathology services, Dr. James Fitzpatrick manages the handling of 70,000 skin specimens each year, with about 3,000 of those being pediatric specimens.

Those numbers posed a problem for Dr. Fitzpatrick, whose staff (including him) at the Aurora, Colo., hospital numbered only four dermatopathologists, the equivalent of 2.6 full-time employees, none of whom were trained specifically to handle pediatric cases. They got little quality support from the general pathologists, he said.

"General pathologists as a rule are not very good at dermatopathology, particularly in pediatric dermatopathology," he said at a meeting of the Society for Pediatric Dermatology. "There are a lot of glaring omissions" in their reports.

What he needed, he decided, was a pediatric dermatopathologist who also could help with the adult dermatopathology workload.

Dr. Fiztpatrick made his case to the chair of the university's dermatology department and to the Children's Hospital in Aurora, and managed to get funding from the Children's Hospital for a pediatric dermatology fellow to learn dermatopathology from him and his staff.

Some physicians criticized the plan, claiming that anyone could do pediatric dermatopathology.

Dr. Fitzpatrick disagreed: "There are a lot of issues that are unique to pediatric dermatopathology."

For example, there was one skin specimen from a 2-year-old that looked exactly like Sweet's syndrome on histology. Clinically, however, the child had osteomyelitis and anemia, two of the clinical features of genetic Majeed syndrome. Further confusing the diagnosis was the fact that Majeed syndrome, like Sweet's syndrome, can cause fever.

"What's the likelihood of your general pathologist or adult dermatopathologist, like me, getting it right?

'It's actually an easy sell, because you make more money in dermatopathology than you do seeing a bunch of kids' in the clinic as a dermatology fellow.

You really need someone with the proper background" to put the clinical and histologic picture together to make the right diagnosis, he said.

The ideal background for pediatric dermatopathology probably should include knowledge of pediatrics and of genetic syndromes, Dr. Fitzpatrick suggested. Training a dermatology resident or pediatric dermatology fellow to become a dermatopathologist probably makes more sense than trying to teach pediatrics to a dermatopathologist or a pathologist, who lacks clinical expertise.

The department chair wanted to know how the position would pay for itself.

"It's actually an easy sell, because you make more money in dermatopathology than you do seeing a bunch of kids" in clinic as a dermatology fellow, he noted.

The plan has worked out beautifully, Dr. Fitzpatrick said.

Dr. Lori Prok, who is the new pediatric dermatopathologist, works in an office right next to his. "When a clinician calls up and says, 'I have a 3-year-old,' I say, 'Hold on a second.' " He can then transfer the call to Dr. Prok for better care.

Those who were resistant at first to the idea of a pediatric dermatopathologist have since come around. "Now, if Lori's gone for 2 days, they hold everything until she gets back," Dr. Fitzpatrick said. Every other week, a case conference brings Dr. Prok together with pathologists, dermatopathologists, and pediatric dermatologists from several departments.

Dr. Fitzpatrick and Dr. Prok have expanded her role since she started to fill another void—research in pediatric dermatopathology.

She is involved in multiple research projects dealing with Spitz nevi, the role of *Polyomavirus* in Langerhans cell histiocytosis, and varicella zoster virus, to name a few.

Pediatric dermatopathology is a niche whose time has come, but so far it has been discovered by only a few physicians, said Dr. Fitzpatrick. If you search the Internet for pediatric dermatopathologists, you'll find a grand total of two, one of whom is Dr. Prok, he noted. ■

FDA Approves Pesticide-Free Head Lice Treatment

BY DAMIAN McNAMARA

The first head lice treatment with benzyl alcohol as the active ingredient has received Food and Drug Administration approval for use in adults and children aged 6 months and older.

The newly approved agent (not yet named) is the first prescription product to kill head lice by suffocation. While the agent lacks pesticides contained in other FDA-approved products, the approval carries a strongly worded warning not to use the agent in premature infants, citing the risk of serious respiratory and heart- or brain-related adverse events such as seizure, coma, or death.

The gestational age of the participants was not known when the clinical study data were submitted to the FDA, Jesse Fishman, Pharm.D., medical information officer for Sciele Pharma Inc. (manufacturer of benzyl alcohol lotion, 5%), said in an interview.

The company recommends only using the product on babies of normal gestation age plus 6 months. Therefore, based on an average full gestation of 40 weeks, a baby born prematurely at 35 weeks could be treated when they reach 6 months plus 5 weeks of age, for example.

The April 9 approval was based on data from two safety and efficacy trials with a total of 628 children with active infestations of *Pediculosis capitis*; the children's average age was 7 years in one trial and 10 years in the other. The study participants underwent two 10-minute applications (1 week apart) of benzyl alcohol lotion, 5% or topical placebo. Scalp examination conducted 14 days after completion of treatment showed that active infestation was resolved in 75% of the participants on active treatment and 26% of those on placebo.

"The warning about not using [the drug] in premature infants is strong," Dr. Seth J. Orlow said in an interview. "Parents and prescribers will want to know how premature an infant must be to fall under the warning, and when an ex-preemie is no longer considered 'a premature infant,' " he said.

The potential for treatment resistance, however, might be lower with benzyl alcohol lotion, 5%, compared with traditional pediculocides, said Dr. Orlow, chairman of dermatology and professor of pediatric dermatology at New York University, New York. He had no relevant disclosures.

The official indication to treat children as young as 6 months with benzyl alcohol lotion, 5% is a plus, Dr. Orlow said. "In addition to other potential benefits, it will no doubt be attractive to some parents who wish to use a 'non-pesticide' type agent. On the other hand, benzyl alcohol is, of course, still a chemical."

The product should be applied only to the scalp or the hair attached to the scalp. Irritation of the skin, scalp, and eyes were commonly reported adverse events in the studies, as was application-site numbness.

Parents who have grown cautious of putting pesticides on their children's heads to treat lice infestations have long ago embraced home remedies. The Internet has thousands of Web sites devoted to alternative treatments for smothering head lice. Many involve coating the child's head with mayonnaise, Vaseline, margarine, olive oil, or some other relatively thick and occlusive, yet washable agent. It is still necessary to comb out the eggs. ■

Mom Drives Infants' Zinc Deficiency

BY BRUCE JANCIN

MAUI, HAWAII — Consider zinc deficiency when an infant presents with an eczema-like dermatitis limited to the diaper and perioral areas.

"Eczema tends not to affect the diaper area because it's so moist and occluded," Dr. Brandie J. Metz noted at the annual Hawaii dermatology seminar sponsored by Skin Disease Education Foundation.

Zinc deficiency in infants can be inherited, acquired, or caused by malabsorption due to cystic fibrosis or other systemic diseases. All forms of zinc deficiency, however, present with the same clinical picture, including the typical rash, diarrhea, and irritability, explained Dr. Metz, a pediatric dermatologist at the University of California, Irvine.

Acquired zinc deficiency is caused by abnormal excretion of zinc into breast milk.

DR. METZ

The perioral part of the rash often occurs in a U-shaped distribution below the mouth. One clue that the perioral and diaper-area dermatitis is not eczema is complete lack of improvement with topical corticosteroids.

Acquired zinc deficiency is caused by abnormal excretion of zinc into breast milk. Affected babies will present while breast feeding and clear a few days after being switched to cow's milk or formula.

In contrast, infants with acrodermatitis enteropathica, the inherited form of zinc deficiency, are fine early on while breast feeding because the zinc in breast milk has good bioavailability. These infants become symptomatic a week or two after weaning from breast milk or at 4-10 weeks of age if they are exclusively breast fed, Dr. Metz continued.

Acrodermatitis enteropathica is a rare autosomal recessive disorder thought to involve a defect in intestinal absorption or zinc transport. It has been linked to the human ZIP4 gene, she noted.

Acquired zinc deficiency can't be diagnosed on the basis of a low maternal plasma zinc level because maternal breast milk zinc levels are independent of maternal blood levels. For the same reason, maternal zinc supplements are ineffective for the treatment of a zinc-deficient baby.

Pediatric plasma zinc levels can be misleadingly normal in children with mild deficiency, particularly if the specimen is contained in a plastic tube or a tube with a rubber stopper, which can leak zinc into the sample, Dr. Metz explained.

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