

# Take a Culture to Confirm Pediatric Tinea Capitis

*Almost a quarter of children were found to have scale; however, 'most scalps that scale are not tinea capitis.'*

BY GREG MUIRHEAD  
Contributing Writer

MAUI, HAWAII — Because tinea capitis in children can be mistaken for a number of different diseases, Dr. Sheila Fallon Friedlander urged physicians, “I want you to culture.”

“Classically, people have thought that you look for hair loss and scaling, but my experience has been that most scalps that scale are not tinea capitis,” she said at a meeting sponsored by the University Childrens Medical Group and the American Academy of Pediatrics.

Although with some presentations tinea capitis can be easy to diagnose, the infection can look unusual and be harder to detect, she said at the meeting, also sponsored by California Chapter 2 of the AAP.

Diseases and conditions that can be mistaken for tinea capitis include seborrheic dermatitis, eczema, psoriasis, alopecia areata, cradle cap, traction folliculitis leading to traction alopecia, and the effects of head lice.

In their study, Dr. Friedlander and a colleague examined 200 children, with half in her organization’s clinic and half in other pediatric practices in San Diego. “What we found is a heck of a lot of kids have scale on their scalp,” she said.

“And a heck of a lot of kids—if you look for it—have [enlarged] lymph nodes in their neck.” On the basis of these two symptoms plus hair loss, many pediatricians have been trained to diagnose tinea capitis, said Dr. Friedlander, director of the fellowship training program in pediatric and adolescent dermatology at Rady Children’s Hospital, San Diego.

“But that’s inaccurate,” she said. “That’s not appropriate. In our study, we found that 22% of kids just walking into the pediatrician’s office had scale, and 55% of them had [enlarged] lymph nodes. Very few of those kids had tinea capitis” (Pediatrics 2005;115:e1-6).

She encouraged checking the lymph nodes, however. “If a child comes in who has scaling and has hair loss and has large lymph nodes, then you are very likely to be dealing with tinea capitis.” But the

child needs to be cultured to confirm the diagnosis.

Dr. Friedlander said her center has done a study that supports taking cultures with a cotton swab, a transport medium otherwise used for strep throat. She instructed the audience to swab all four quadrants of the patient’s scalp and send it out to a lab. Even if the sample swab sits at room temperature in the office for a couple of days before delivery to the lab, the results still should be good.

“Ninety-five percent of tinea capitis in this country is caused by *Trichophyton tonsurans*,” she said, which is believed to have come from Central and South America.

Tinea capitis is the most common dermatophyte infection in children, frequently affecting those who are aged 3-7 years, she noted. “It commonly affects the preschool age group.”

“The prevalence is somewhere between 0% and 8% in any given place, depending on the city you’re looking at,” she said, and it’s even higher in some urban populations and among African Americans. Prevalence appears to be relatively higher in immigrants from Africa.

While taking the patient’s history, Dr. Friedlander continued, also ask about family members, “because often there will be

somebody else in the house who is scaling.”

As for treatment, a meta-analysis of six studies found that a 2- to 4-week course of terbinafine is “at least as effective” as a 6- to 8-week course of griseofulvin for *Trichophyton*. But for *Microsporum* infections, griseofulvin is likely the better treatment (Pediatrics 2004;114:1312-5).

“High-dose griseofulvin is the current drug of choice; it’s FDA approved,” she pointed out. It should be given with food to aid absorption. Keep in mind that children clear the drug faster than do adults, and therefore need a high dose. Patients should be rechecked in 4 weeks. Most of Dr. Friedlander’s patients are treated for 8 weeks. Lab tests are not needed if patients use the drug for 8 weeks or less.

“Consider off-label use of terbinafine if there is griseofulvin failure,” she said.

As an aid to therapy, the use of anti-fungal lotions and shampoos help decrease the time of infectivity, Dr. Friedlander said. She has her patients use Nizoral shampoo twice a week. Selenium sulfite is another option.

Dr. Friedlander disclosed that she is on the speakers’ bureau, a consultant, and/or involved with clinical research trials for Novartis AG, Pfizer Inc., and Dermik Laboratories. ■

## Valacyclovir as Good as Acyclovir For Prevention of Ocular Herpes

BY ROBERT FINN  
San Francisco Bureau

Once-daily oral valacyclovir is as good as twice-daily oral acyclovir for preventing the recurrence of eye disease caused by herpes simplex virus, according to a recent study.

In a randomized, controlled trial, Dr. Elisabetta Miserocchi of the San Raffaele Scientific Institute, Milan, and her colleagues compared 26 patients taking a single 500-mg tablet of valacyclovir daily with 26 patients taking 400-mg tablets of acyclovir twice daily (Am. J. Ophthalmol. 2007 Aug. 9 [Epub doi:10.1016/j.ajo.2007.06.001]).

All patients were immunocompetent and had a history of recurrent ocular herpes simplex virus (HSV) disease. By the end of 12 months of daily therapy, six of the patients in the valacyclovir group and six of the patients in the acyclovir group (23% in both cases) experienced a recurrence of ocular HSV.

Both drugs were well tolerated, and the incidence of adverse events was similar in both groups. Gastrointestinal upset and headache were the most frequent treatment-related side effects. Three patients in the valacyclovir group and four patients in the acyclovir group experienced nausea and vomiting, and five patients in the valacyclovir group and three patients in the acyclovir group experienced headache.

The investigators noted that HSV is the leading cause of corneal opacity and secondary visual loss in the United States and other industrialized countries, affecting some 450,000 people, with 50,000 new and recurrent cases each year. Recurrent episodes are frequent, with about 10% of patients reporting recurrence at 1 year, 23% at 2 years, and 63% at 20 years.

Although acyclovir is effective at preventing HSV recurrence, the drug has relatively poor oral bioavailability, and resistant isolates may develop. Valacyclovir is a prodrug of acyclovir, and is rapidly converted to acyclovir after administration. Plasma concentrations after oral valacyclovir are similar to plasma concentrations after intravenous acyclovir.

The authors acknowledged that valacyclovir treatment is more costly than acyclovir treatment, and that even acyclovir prophylaxis costs about \$8,532 per ocular HSV episode averted, according to one study. Because this is not cost effective for all patients, “therapeutic decisions must be made on a case-by-case basis; prophylactic therapy may be appropriate for patients with sight-threatening recurrences, frequent episodes, or other reasons for reduced quality of life caused by ocular herpes,” wrote Dr. Miserocchi and her associates.

They posited that the single daily dose of valacyclovir is likely to result in better compliance than is the multiple daily doses required with acyclovir. Therefore, valacyclovir may be particularly beneficial in cases of acyclovir-resistant HSV in which high-dose systemic or intravenous treatment with acyclovir has been necessary, and in which the resistance has been attributed to inadequate drug exposure.

“Because the optimal levels of acyclovir are achieved with a simpler dosing regimen of valacyclovir, compliance may be improved in many patients, thus reducing the incidence of a resistant virus,” the investigators wrote. “A compound with improved absorption and bioavailability theoretically would extend the therapeutic usefulness of the drug.”

The investigators stated that they had no conflicts of interest related to their study. ■

## Can Optic Neuritis After Varicella Go Untreated?

BY ROBERT FINN  
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A 6-year-old boy developed unilateral optic neuritis following a varicella infection, but the neuritis improved spontaneously with only symptomatic relief provided, investigators reported.

Some clinicians advocate the early use of steroids for optic neuritis, but others point out that steroids might exacerbate the condition if there is direct viral invasion of the optic nerve, wrote Dr. Panagiotis K. Stergiou and his colleagues from Hippokraton General Hospital, Thessaloniki, Greece.

One week following a varicella eruption, the boy presented with severely decreased visual acuity and painful movement of his right eye; he was only able to count fingers for a counting test with that eye.

The child’s pupil was dilated and sluggishly reactive to light, and he had no color vision. His left eye was normal, with 20/20 vision (Pediatr. Neurol. 2007;37:138-9).

Fundoscopy examination revealed edema of the right disk with opacification of the nerve fibers, venous engorgement, and a splinter hemorrhage at

the margin of the disk. Visual evoked potential measurements revealed abnormal responses in the right eye, while the left eye remained normal.

Clinicians prescribed only symptomatic relief with antipyretics, and the boy returned 4 weeks later with a visual acuity of 20/60 in the right eye. After 3 months there was further improvement to 20/40, but the right optic disk remained pale, the pupil did not react to light, and the boy’s color perception remained poor.

The investigators noted that optic neuritis is a rare complication of varicella, and that it often accompanies other complications such as acute transverse myelitis, encephalomyelitis, ataxia, and retinopathy.

The pathogenesis is unknown, and the condition may result from direct viral invasions or from an autoimmune mechanism.

Dr. Stergiou and his colleagues wrote that steroid treatment is usually contraindicated because the disease typically improves both rapidly and spontaneously.

Steroids do appear to be appropriate, however, in cases of bilateral optic neuritis after chickenpox. ■