

## An Easy, Kid-Friendly Strategy to Fight Toenail Onychomycosis

Often considered a second-line or adjunctive agent in adult patients, ciclopirox nail lacquer may provide safety and efficacy for pediatric patients.

By Ted Pigeon, Associate Editor

Treating onychomycosis can present difficult challenges for dermatologists, especially in pediatric patients. Among adults, some forms of therapy that yield positive results often pose health risks, while topical treatments with minimal risks tend not to be as effective. However, that may not be the case among children. According to results of a small study, topical ciclopirox 8% (Penlac, Dermik) lacquer may offer both efficacy and safety in pediatric patients.<sup>1</sup>

According to Lawrence Eichenfield, MD, Chief of Pediatric and Adolescent Dermatology at the University of California, San Diego School of Medicine and principal investigator for the study, the increased efficacy of ciclopirox lacquer in children compared to adults may be because the nail plates of pediatric patients are thinner, thus allowing the antifungal agent to more easily penetrate the nail. Although toenail onychomycosis isn't incredibly common in pediatric patients, Dr. Eichenfield notes that it's not uncommon either. He suggests it is probably more prevalent than in past decades, which is why it is important to know how to treat it and what works best.

### Encouraging Results

The study assembled 40 patients between the ages of two and 16 who all had a positive fungal culture and at least 20 percent involvement of a toenail but lacking nail matrix involvement. Patients were randomized three-to-one

to either ciclopirox 8% lacquer or vehicle. Patients applied either the vehicle or drug daily to all toenails for 32 weeks. Researchers performed Investigator's Global Assessment (IGA) and mycological culture evaluations on weeks eight, 12, 24 and 32. IGA evaluated length, width, and area of target toenail involvement and clinical improvement, with zero equaling complete clearance, one equaling greater than 75 percent but less than 100 percent clearance, two equaling greater than 50 percent but less than 75 percent clearance, three equaling less than 50 percent improvement, four equaling no significant change, and five being a worsening of the fungal culture. On week 12, researchers rolled over patients to open label drug if IGA scores were greater than two and the cultures were positive.

At enrollment, 30 patients received Ciclopirox lacquer and 10 received vehicle lacquer. Seventy percent of vehicle patients rolled over to Ciclopirox lacquer after 12 weeks; 37 subjects completed the study on Ciclopirox lacquer while three remained on vehicle. At 32 weeks, 27 (72.97 percent) treated patients had a negative culture and an IGA score of less than two, fulfilling the criteria for effective therapy, while 29.7 percent had complete cure. At the study's endpoint, 13 patients (81.25 percent) between the ages of two and eight had an IGA score of less than two and mycologic cure. Furthermore, eight patients (50 percent) aged two to eight years were completely cured.

These results suggest that ciclopirox is more effective for very young patients with the condition. While results of the study indicate that the formulation may provide benefit for most pediatric patients, data suggest that ciclopirox works best for children between the ages of two and eight.

Of course, there are additional strategies that Dr. Eichenfield recommends to hasten clearance and discourage recurrence. "Physicians should look for concurrent tinea pedis in the child and family members, and treat to prevent 'ping-ponging' of infection from person to person," he suggests.

### Pro-Anti-Fungals

"The study showed that topical therapy may be very successful for pediatric onychomycosis and should be considered for patients with absence of nail matrix involvement," says Dr. Eichenfield. There may be a tendency to hesitate when it comes to using antifungal therapies to treat this condition in children, but the current study suggests new options for managing future cases of pediatric onychomycosis. This is especially useful, considering that many parents are skeptical when it comes to systemic therapies, notes Dr. Eichenfield. 

1. P1202 A prospective, double-blind, placebo-controlled trial of topical ciclopirox 8% nail lacquer for therapy of onychomycosis in children. Alessandra Alió Sáenz, MD, Lawrence Eichenfield, MD, Sheila Friedlander, MD, Children's Hospital/UCSD San Diego School of Medicine, San