A New Dermoscopic Finding in Healthy Children

Dermoscopy and videodermoscopy are increasingly being used in the evaluation of hair and scalp disorders to improve our diagnostic capabilities and ease clinical management. The term trichoscopy has recently been proposed to refer to hair and scalp examination with dermoscopy. To our knowledge, there are no reports of dermoscopic scalp findings in healthy children.

Methods. Dermoscopic images were obtained from 19 participants, ages 5 months to 14 years, with no prior diagnosis of hair or scalp disease, during the period January 2004 to May 2008. Images were acquired using a computerized polarized-light videodermoscopy system (FotoFinderdermoscope; Teachscreen Software, Bad Birnbach, Germany), with a water interface solution (Eau Thermale Avène, Paris, France), at magnifications ranging from ×20 to ×70. Two patients were reevaluated 3 years after their initial examination. An additional patient was examined within the same day, before and after shampoo of the scalp. Bacterial and fungal cultures were obtained from 2 subjects.

Results. Nineteen healthy subjects ranging in age from 5 months to 14 years underwent scalp examination by dermoscopy. Study participants were divided into 3 age groups: younger (<9 months old [2 of 19; 11%]), intermediate (between 9 months and 10 years old [12 of 19; 63%]), and older (>10 years old [5 of 19; 26%]). All participants had skin types I, II, or III; 53% of subjects were boys, and 47% were girls.

Dermoscopy revealed dirty dots, a novel finding readily appreciated on the scalps of 10 of 19 of subjects (53%). Dirty dots appeared as brown, black, and occasionally red, yellow, and blue particulate dots and loose fibers. They were clumped and distributed haphazardly, and best viewed at ×20 and ×70 original magnification under epiluminescence (Figure 1). In our series, dirty dots predominated in subjects aged 9 months to 10 years (10 of 12; 83%). In 2 children, dirty dots grew more scarce with age. Dirty dots were not seen in children younger than 9 months (0 of 2; 0%), or older than 10 years (0 of 5; 0%).

In 1 subject, dermoscopic features were evaluated twice within the same day, before and after shampooing; dirty dots were noted to disappear after shampooing (Figure 2). Of the 9 children with dirty dots for whom comparison images from the frontal, parietal, and occipital scalp were captured, dirty dots were most prominently featured on the frontal scalp. In 2 subjects with dirty dots, bacterial and fungal cultures of the scalp did not reveal pathogenic species.

Yellow epidermal scale consistent with previously undiagnosed seborrheic dermatitis was most common in younger (1 of 2 subjects; 50% of those <9 months) and older children (3 of 5 subjects; 60% of those >10 years) and less so in those between 9 months and 10 years old (1 of 12 subjects; 8%). One case of white epidermal scale was seen in both the intermediate and older age groups. Vascular features, although less pronounced in our series than previously seen in adults, were present across all age groups.

Figure 1. Dirty dots as viewed at ×20 (A) and ×70 (B) original magnification. Epiluminescence images taken from the vertex scalp.
Comment. Scalp dermoscopy or trichoscopy is a useful noninvasive adjunct to the pediatric scalp examination that allows the rapid capture of high-resolution images for in vivo evaluation. We describe a novel normal scalp finding in children and document the presence of dermoscopic patterns previously described in adults.

Dirty dots, which present on the scalp as clumped and haphazardly arrayed particulate debris and loose fibers of various colors, were most commonly found in the intermediate age group (83% of those aged 9 months to 10 years; 10 of 12), and not at all in younger or older age groups. Two intermediate-aged subjects reevaluated 3 years after their initial examination demonstrated an improvement with age. The experience of 1 of us (A.T.) suggests that dirty dots are rarely if ever seen on the adult scalp.

Bacterial and fungal cultures from the scalp of 2 subjects with dirty dots were negative. Dirty dots were readily removed by shampoo, but reaccumulated as early as 1 day afterwards. Unlike dirty dots, the yellow scale of seborrheic dermatitis was more common in younger and older children.

We present dirty dots as a novel and unique dermoscopic finding of the normal scalp examination in prepubertal children. Dirty dots likely represent nonmicrobial environmental particles and should not be confused with cadaverized hairs or other abnormal trichoscopic structures. Given the negative correlation between the presence of dirty dots and seborrheic dermatitis in our series, we postulate that the relative decrease in sebaceous activity in prepubertal children may lead to an inability to repel particulate debris from exogenous environmental sources. Future studies to elucidate the potential relationship between dirty dots and sebaceous activity will be of interest.

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Myopathy Induced by Antimalarial Agents: The Relevance of Screening Muscle Enzyme Levels

Myopathy induced by antimalarial agents (AMM) is presumably clinically rare, and little is known about its pathogenesis. Defined as clinical muscle weakness in a patient receiving antimalarial therapy, AMM has a reported incidence of 2 to 10 cases in 1000 patient-years and a prevalence of less than 2%.1,2

Recently, Casado et al7 performed the first prospective study of AMM. Screening their patients’ muscle enzyme levels, including creatine kinase, lactate dehy-