

# Bald spots on a young girl

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An 8-year-old Hispanic girl was brought to see her family physician by her mother, who noticed 2 bald spots on the back of her daughter's scalp while brushing her hair. The child had no itching or pain. No obvious precipitating events preceded the hair loss.

The mother was more worried than the child: she didn't want to see her beautiful girl become bald. The girl was pleased that the bald spots could be completely covered with her long hair, but she didn't want anyone to see them. The child was otherwise healthy. She did not have any chronic medical problems and was not taking any medications. No one else in the family had a similar problem.

When the mother lifted the hair in the back, 2 round areas of hair loss were evident (**Figure 1**). On close inspection, there was no scaling or scarring. Her nails were normal. The child was afebrile, and the remainder of her exam was unremarkable.

## ■ WHAT IS THE DIAGNOSIS?

## ■ WHAT ARE THE MANAGEMENT OPTIONS?

**FIGURE 1** Two round areas of hair loss



*Two round areas of hair loss on the back of the head of an 8-year-old girl. There is no scaling or scarring, and she was otherwise in good health and taking no medications.*

**FIGURE 2** More extensive alopecia

*Extensive alopecia areata may respond to topical diphenylcyclopropenone or to aromatherapy.*

#### ■ DIAGNOSIS: ALOPECIA AREATA

This is the typical appearance of alopecia areata, a chronic inflammatory disease that affects the hair follicles, causing sudden hair loss. Sometimes it affects the nails as well.<sup>1</sup> Alopecia areata occurs in both males and females of all ages and races.

Alopecia areata may be an autoimmune disease, though this is unproven. The affected skin may be slightly erythematous but otherwise appears normal. Short broken hairs (exclamation-mark hairs) may be seen around the margins of expanding patches of baldness. The nails are involved in about 10% of patients with severe enough alopecia to be referred to a specialist.<sup>1</sup>

Many cases begin in childhood and can be psychologically devastating. Alopecia areata is

**FIGURE 3** Alopecia universalis

*Long-standing alopecia universalis, for which no treatment has proven helpful.*

part of a spectrum of diseases with mild to extensive hair loss (**Figure 2**), including alopecia totalis, in which all the hair on the scalp is lost, and alopecia universalis (**Figure 3**), in which all the hair on the body is lost. Extensive involvement, early age of onset, and Down syndrome are all poor prognostic factors for alopecia areata.

#### Differential diagnoses

The differential diagnosis for alopecia areata includes tinea capitis, trichotillomania, early scarring alopecia, telogen effluvium, anagen effluvium (drug-induced), systemic and discoid lupus erythematosus, and secondary syphilis. In most cases the history and physical exam are adequate to make the diagnosis.

#### ■ SUBMITTING IMAGES TO PHOTO ROUNDS

Do you have images (slides, prints, digitized photos) of compelling clinical cases of interest to family physicians? We would like to publish them, along with a brief description of the clinical presentation and a diagnostic question for readers. The case should include information on the differential diagnosis and treatment, the latter applying an evidence-based approach supported by current references. Submit electronic files to [usatine@uthscsa.edu](mailto:usatine@uthscsa.edu), or send high-quality slides and prints to:

**Richard P. Usatine, MD, Editor, Photo Rounds, University of Texas Health Science Center at San Antonio, Department of Family and Community Medicine, MC 7794, 7703 Floyd Curl Drive, San Antonio, TX 78229-3900.**

This patient does not have the typical scalp scaling and inflammation seen with tinea capitis. Trichotillomania—hair loss caused by the purposeful pulling of hair by the patient—is likely to cause the most confusion because it coexists with alopecia areata in some cases. This child has shown no evidence of such behavior. She also has no evidence of scalp scarring as may be seen in lupus. Telogen effluvium and anagen effluvium cause a more even distribution of hair loss. The patient has no known risk factors for secondary syphilis.

### Laboratory testing

No lab tests are needed in this case. If there were some scalp scaling or inflammation, a potassium hydroxide preparation of the involved area would be useful to look for fungal elements; a fungal culture might also be warranted. If needed, further investigations might include serological testing for lupus erythematosus and syphilis, and a skin biopsy if the diagnosis is still unknown.

### ■ TREATMENT: TIME, DRUG THERAPIES, AROMATHERAPY

Spontaneous remission occurs in up to 80% of patients with limited patchy hair loss of less than 1 year.<sup>1</sup> Spontaneous remission rates are significantly lower with more extensive hair loss.

Treatments are potentially painful, expensive, or time-consuming, and few randomized controlled trials support their use. Often the best treatment is watching for spontaneous remission.

The only adverse health effect of alopecia areata is the psychological distress that it may cause. While this is not to be taken lightly, the lack of evidence for successful treatments needs to be weighed with the patient's ability to cope with leaving the hair loss untreated over time. In cases of extensive hair loss, the best treatment may be a wig.

For patients that have more visible and extensive areas of hair loss, the psychological

### Internet resources

#### National Alopecia Areata Foundation Web site:

[www.alopeciaareata.com](http://www.alopeciaareata.com). Patients can order a 7-minute video, *This Weird Thing That Makes My Hair Fall Out: Alopecia Areata*, which is available for any children who want a way to share their feelings about alopecia areata with friends, family, peers, schoolmates, principals, and teachers.

#### European Hair Research Society Web site:

[www.ehrs.org](http://www.ehrs.org). Web site has links to several alopecia areata sites.

impact might prompt the patient to want any treatment available despite the lack of evidence. Alopecia totalis or universalis may cause considerable psychological and social disability. Patients can be referred to the National Alopecia Areata Foundation for support groups and additional information. Individual counseling may be needed for some patients.

### Steroid injections

Intralesional steroid injections may stimulate regrowth of hair at the site of injection (level of evidence [LOE]=5).<sup>1</sup> The effect may last a few months, but there is no evidence that it improves the long-term outcome or increases the probability of a cure. New areas of alopecia can still develop.

Injections are typically performed with 5–10 mg/mL of triamcinolone acetonide using a small-gauge needle. Most children will not be able to tolerate the scalp injections and should not be forced to endure this type of therapy even if the parent is pushing for it.

### Other medications

Topical diphenylcyclopropenone (DPCP) is a contact immunotherapy that has some proven benefit with extensive alopecia areata (LOE=2b).<sup>1,2</sup> In 1 study, 56 patients with chron-

ic, extensive alopecia areata (duration ranging from 1 to 10 years, involving 30% to 100% of the scalp) were treated with progressively higher concentrations of DPCP in a randomized crossover trial.<sup>2</sup> Twenty-five of 56 patients had total hair regrowth at 6 months, and no relapse occurred in 60% of patients. Side effects included local inflammation, eczema, autosensitization reaction, and eyelid edema.

Unfortunately, contact immunotherapy involves multiple visits to the office over several months, and it stimulates cosmetically worthwhile hair regrowth in <50% of patients with extensive patchy hair loss.<sup>1</sup> It is a reasonable alternative for patients who do not have spontaneous remission after 1 year.

While potent topical steroids and topical minoxidil are prescribed for limited patchy alopecia areata, no convincing evidence shows they are effective.<sup>1</sup> Likewise, no evidence warrants the use systemic steroids or psoralen/ultraviolet light treatment (PUVA).<sup>1</sup>

### Aromatherapy

The best evidence may be for aromatherapy. A single-blinded randomized controlled trial was performed with 86 patients.<sup>3</sup> As Dr Ebell points out in his InfoPOEMs review of this study, aromatherapy involves rubbing scented essential oils into the skin to treat localized and systemic disease.<sup>4</sup> Patients with alopecia areata were randomized to nightly aromatherapy—with *Thymus vulgaris* (thyme), *Lavandula angustifolia* (lavender), *Rosmarinus officinalis* (rosemary), and *Cedrus atlantica* (cedar)—or to a control consisting of carrier oils only.

Improvement was seen in 54% of the treatment group and 21% of the control group ( $P=.008$ ; number needed to treat=3). Of the 19 patients in the active treatment group who reported improvement, 11 had “very good” or “excellent” improvement. The results show aromatherapy to be a safe and effective treatment for alopecia areata (LOE=1b).<sup>4</sup>

The main problem with this study is that the researchers did not describe the duration of the patients' alopecia. However, in a reply to a letter, they described the patients as having had alopecia areata from less than 1 year to more than 9 years. This explains the low improvement rates in both groups but does not invalidate the statistically significant difference for those that received the essential oils.

### ■ CONCLUSION OF VISIT, FOLLOW-UP

For a mild case like this in which the hair loss can be hidden, the best treatment is reassurance and observation. The physician explained the natural history of the disease, including the fact that regrowth will take at least 3 months for any single patch. Therapeutic options were also discussed. The mother and child were reassured that the hair is likely to grow in on its own. Neither of them wanted intralesional injections or topical therapies.

One year later during a well-child check, it was noted that the girl's hair had fully regrown.

### REFERENCES

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