DECISIONS

Patchy hair loss in an otherwise healthy man

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See also review article by Filbrandt and colleagues on page 1579 and at www.cmaj.ca/lookup/doi/10.1503/cmaj.111570

A 35-year-old man presents to his primary care physician with a sudden history of hair loss on his scalp. He has no relevant medical history. An examination shows a single circular patch of alopecia on the parietal scalp. A representative image is provided in Figure 1.

What diagnoses should be considered?

The most important diagnosis to consider is alopecia areata. This is an immune-mediated form of hair loss that most commonly affects the scalp, but it can affect any hair-bearing site. It can occur in any ethnic group, both sexes and at any age, with an estimated lifetime risk of 1.7% in the general population.¹ Other diagnoses to consider include tinea capitis, trichotillomania and cicatricial (scarring) alopecia.^{2,3}

Does this patient have alopecia areata?

Alopecia areata is a clinical diagnosis that can usually be made based on history and clinical features alone. Increased hair loss is rapidly followed by the identification of 1 or more patches of complete hair loss. Scalp symptoms are uncommon. Well-demarcated, circular patches of alopecia with normal looking skin are typically seen on the scalp. The most characteristic clinical sign in alopecia areata is “exclamation mark” hair, which is usually found at the edge of an active area of hair loss. These are short, broken hairs that are thicker toward the distal end and thinner at the base.

The extent of hair loss in alopecia areata can vary enormously, from a coin-sized patch to complete loss of hair on the scalp and body. Alopecia totalis is the term used to describe complete hair loss on the entire scalp, alopecia universalis describes complete scalp and body hair loss, and ophiasis describes the band-like pattern of hair loss that affects the occipital scalp margin. Alopecia areata may be associated with other autoimmune diseases such as thyroid disease, vitiligo and pernicious anemia.^{2,3} The nails are involved in 10% of patients who are referred to a dermatologist.²

What tests are required?

Usually no tests are required to make the diagnosis of alopecia areata. Routine screening for associated autoimmune conditions is not currently recommended for asymptomatic patients with alopecia areata.² Scalp biopsy may be required if there is doubt about the diagnosis. The characteristic lymphocyte infiltrate (i.e., “swarm of bees”) around the hair bulb of affected follicles will differentiate acute alopecia areata from traumatic (i.e., trichotillomania) and scarring disorders. If patchy hair loss is associated with inflammation of the scalp (i.e., increased scale, crust, pustules and erythema), mycology testing should be performed, especially for affected children.

What are the management options?

The management of alopecia areata can be challenging because most interventions have not been evaluated in randomized controlled trials.⁴

Spontaneous regrowth is very common in patchy alopecia areata (over 50% cases within 1 yr); therefore, a reasonable option for some

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Figure 1: Representative image of alopecia areata, showing a single patch of hair loss on the occipital scalp.

patients will be to wait for spontaneous recovery.² Intralesional corticosteroids (level of evidence 3; case-reports, case series) are widely regarded as first-line therapy for patchy alopecia areata based on observations of tufts of regrowth at injection sites. Intradermal injections of triamcinolone acetonide given every 2–6 weeks stimulate localized regrowth in 60%–67% of cases.² Adverse outcomes include pain, cutaneous atrophy and changes to skin pigment.^{2,3}

For extensive alopecia areata (affecting > 50% of the scalp area), topical immunotherapy (level of evidence 2++; high-quality systematic reviews of case-control or cohort studies) is recommended based on evidence from half-head studies.^{3,5,6} This treatment involves inducing a localized allergic contact dermatitis reaction by weekly applications of 2,3-diphenylcyclopropenone painted directly onto the scalp. The largest reported series ($n = 148$) reported cosmetically acceptable hair regrowth in 17% of patients with alopecia totalis, 60% of patients with 75%–99% hair loss, 88% of patients with 50%–74% hair loss, and all patients with less than 50% hair loss.⁵ Regional lymphadenopathy, generalized eczema and skin pigment changes were the most common adverse events.

Other treatment options include systemic corticosteroids, short-contact dithranol therapy, topical minoxidil, psoralen plus ultraviolet A photochemotherapy and systemic immunosuppressants.^{2–4}

Is referral necessary?

Referral to dermatologist should be considered if there is any doubt about the diagnosis or if the alopecia areata is extensive or resistant to treatment.

What is the prognosis?

The course of alopecia areata is unpredictable, and treatment has not been shown to affect the long-term prognosis. Most cases of alopecia areata resolve spontaneously within 1 year. Between 86% and 100% of patients experience further episodes, and data from a large case series suggest that about 30% of patients with patchy disease will eventually experience complete hair loss.^{3,7} Extensive scalp involvement, long duration of disease, onset in childhood, nail abnormalities and atopy are all associated with poorer prognosis.^{2,3}

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