Alopecia

1. Alopecia

> My patient was a glamorous woman in her early 30s with beautiful thick blond hair. She sat down and promptly burst into tears, then took my breath away by removing the wig I had not spotted to show me her shiny red scalp. She explained that she hoped I could refer her back to dermatology to consider further treatment options for her longstanding alopecia.

Differentiating between scarring and non-scarring alopecia is important because scarring alopecia is irreversible, so early intervention is required to minimise hair loss.

Below, we will look at some of the diagnostic clinical features to help us distinguish which cases we can manage in primary care and which need prompt referral. We will also look at some primary care management strategies for alopecia areata, using information drawn from a British

Association of Dermatologists guideline (2012), NICE CKS accessed in December 2020, a JAMA clinical update (JAMA 2021;325:878) and the Primary Care Dermatology Society guidance accessed December 2020.

This article was reviewed in December 2023.

1.1. An approach to diagnosing hair loss

Is it scarring or non-scarring?

Non-scarring	Scarring
• No visible inflammation. • Atrophy absent. • Hair tufting absent. • Dermoscopy: tends to have preserved follicular openings.	• Inflammation commonly present. • Atrophic, often shiny appearance. • Dolls' hair tufting may be seen in long-term severe cases. • Dermoscopy: loss of follicular openings, follicle heads may have a black 'clubbed' appearance.

For non-scarring alopecia – what is the pattern of hair loss?

Male pattern	Female pattern	Diffuse	Patchy
• Recession of frontal hairline in a triangular pattern, followed by thinning of the vertex.	• Diffuse thinning of the centroparietal region. • If associated with hirsutism or other signs of virilisation, consider hyperandrogenism.	• Widespread thinning of hair growth across the whole scalp.	• Well-rounded, discrete patches of hair loss.

1.2. Differential diagnosis of alopecia

Diffuse	Patchy	Scarring
• Age-related. • Drug causes: chemotherapy. • Telogen effluvium. • Hormonal disorders: commonly thyroid. • Iron deficiency anaemia. • Other nutritional disorders, including zinc deficiency. • Secondary syphilis.	• Alopecia areata. • Trichotillosis (frontal and temporal, unusual shape patches, mixed ages of hair regrowth). • Traction alopecia (from tight braiding).	• Tinea capitis (usually associated with scale/inflammation). • Discoid lupus erythematosus. • Lichen planopilaris. • Scleroderma. • Other, more rare, causes: pemphigus, erosive pustular dermatosis, folliculitis declevans.

Assessment

- Look for evidence of hair regrowth – this will affect management choices later.
- Ask about triggers: emotional stress, new medications, diet and nutrition.
- Ask about impact on mood and quality of life.

- Family or personal history of atopy and autoimmune disease.
- Consider FBC, ferritin, TFTs in all, and wider bloods for hormonal or autoimmune conditions where relevant.
- Consider skin scraping or swabs where relevant.

Alopecia areata

Alopecia areata is a chronic inflammatory condition of the hair follicle, causing patchy, non-scarring hair loss. It most commonly affects the scalp but can affect the entire body.

Diagnostic features

- Sudden onset. Further patches may develop 3–6 weeks later. New patches can appear in a cyclical pattern.
- Hair may regrow within months, or the hair loss may be more long term.
- Exclamation mark hairs may be visible (short, broken hairs around the margins of alopecia patches).
- Smooth, healthy-looking skin: normal colour or possibly slightly pinkish.
- Usually asymptomatic; occasionally, skin may tingle, itch or burn.
- Dermatoscope examination may show yellow or black dots on the skin where hair has broken off, pigtail hairs (coiled) and exclamation mark hairs.
- Nail changes in 10%: pitting most common.

Management

Management depends on the clinical context and underlying cause.

<table>
<tr><td rowspan="5">Alopecia areata</td><td colspan="2">Patient advice:
Hair will usually regrow within a year. Prognosis is worse the more extensive the loss.
Treatments may help trigger regrowth but cannot cure the condition: most patients will experience further episodes.
Use sunblock.
Signpost to cosmetic treatments such as wigs. These can be purchased privately or prescribed in secondary care, though the patient will still have to pay a considerable amount.
Offer counselling and psychological support where appropriate.</td></tr>
<tr><td>Visible regrowth</td><td>No treatment.</td></tr>
<tr><td>No regrowth, hair loss <50%</td><td>Watchful waiting.</td></tr>
<tr><td>No regrowth, hair loss >50%</td><td>Consider treatment:
Potent or very-potent topical steroids for 3 months (not on the face).
Steroid-sparing agents such as topical tacrolimus can be considered for facial hair loss.</td></tr>
<tr><td colspan="2">Refer if:</td></tr>
</table>

- No response to topical treatment.
- Diagnosis uncertain.
- Pregnant or breastfeeding.
- Any alopecia in a child (onset in childhood carries a poor prognosis for recovery).
- Emotional support needed.
- Wig desired: can be obtained through dermatology departments in some cases.

Treatment in secondary care may include:

- Intralesional corticosteroids (triamcinolone): this is usually used first line.
- Dithranol: often used second line in persistent disease. The aim is to induce low-grade dermatitis.
- Topical immunotherapy: dinitrochlorobenzene, diphencyprone and SADBC used, but not in primary care. The aim is to induce a low-grade contact dermatitis that stimulates hair regrowth. The more extensive the hair loss, or the longer it has been present, the less effective this treatment is.
- Topical super-potent steroids (often under occlusion) or less-potent steroids in the form of a foam: only small trials showing limited effectiveness.
- Systemic corticosteroids: one tiny RCT showed that one-third of patients responded but relapse rates were high. Rarely used because of systemic side-effects (BMJ 2010;340:c3671).
- Minoxidil: not available on NHS prescription and is expensive OTC. Treatment may take 6 months to show benefit, and any effect will rapidly be lost if treatment is discontinued. May be most beneficial in preventing relapse rather than to induce hair growth initially.
- Systemic immunosuppressants such as azathioprine, cyclosporine and methotrexate (used off-licence).
- Biological drugs: pharma-sponsored phase 3 trials of the biological drug baricitinib (a JAK inhibitor) indicate a good

	response, with almost 40% of patients achieving 80% scalp hair coverage after 8 months, with a low side-effect profile (NEJM 2022;386:1687, NEJM 2022;386:1751). • In October 2023, NICE recommended *against* baricitinib for alopecia areata, due to high cost and the need for long-term prescribing to maintain benefits. Notably, NICE commented that despite good evidence for hair regrowth, this did not translate to health-related quality of life improvement. Those receiving NHS-prescribed baricitinib prior to the NICE publication may continue (NICE TA926).
Scarring alopecia	Prompt referral to secondary care. Treatment may include intralesional steroids, antibiotics, antifungals, retinoids and immunosuppressive therapies.
Female pattern hair loss	Minoxidil may be advised privately. Oral treatments such as spironolactone, cyproterone acetate and cimetedine may be considered off licence (but note safety concerns for cyproterone, below). There is no evidence of effectiveness for these treatments.
Male pattern hair loss	• 5% minoxidil lotion is licensed in men but is not available on NHS prescription. • Finasteride (1mg): • Can stop hair loss but only for the duration of treatment (some evidence for use over a 5-year period). • Systemic side-effects include erectile dysfunction and reduced libido (although often transient). • Finasteride 1mg is licensed for the treatment of androgenic alopecia but is only available via private prescription (not on the NHS). • A DTB review from 2017 (DTB 2017;55(8):87) reminded us that finasteride 1mg for androgenic alopecia has been associated with depression. In 2017, the MHRA issued an alert outlining that all patients

	taking finasteride 1mg for alopecia should be advised to stop treatment immediately and inform a healthcare professional if they develop depression (Drug Safety Update May 2017).

DRUG DILEMMA: Cyproterone acetate with ethinylestradiol (co-cyprindiol) (Dianette)

Cyproterone acetate has been the subject of 2 MHRA safety alerts (Drug Safety Update 2013;6(11):A3 and 2020;13(11):2).

Thromboembolic risk

- Cyproterone acetate with ethinylestradiol can be used by women of reproductive age for the treatment of:
  - Androgen-sensitive skin conditions, e.g. severe acne.
  - Hirsutism.
- It should only be used when topical treatment and systemic antibiotics have failed.
- It is an effective contraceptive but should **not** be used solely as a contraceptive.
- It should not be co-prescribed with another COCP.
- The risk of VTE is low but we should remain vigilant: it is 1.5–2 times more likely to cause VTE than levonorgestrel-containing pills, but it is similar to desogestrel-, gestodene- and drospirenone-containing pills.

Meningioma risk

Do not use cyproterone for any indication in patients with a meningioma or a history of a meningioma.

A cumulative dose-dependent association between cyproterone acetate and meningioma has been identified.

- The risk is highest in doses of 25mg per day and above.
- A risk of meningioma has not been demonstrated with low doses used in combined contraceptives.
- Be vigilant for symptoms and signs of meningioma in patients taking cyproterone acetate (changes in vision, hearing loss, tinnitus, anosmia, postural headaches, memory loss, seizures).
- Stop treatment permanently if a meningioma is diagnosed in a patient taking cyproterone acetate.

Alopecia

- Scarring alopecia requires prompt referral to secondary care as hair loss is irreversible.
- Consider whether the hair loss is diffuse or patchy, as this will help in diagnosis.
- Alopecia areata causes patchy, non-inflamed hair loss. Visible regrowth may be present.
- Treatment of alopecia in primary care includes reassurance and education. Topical steroids may be used in some cases.
- We should refer people with alopecia areata if:
    - No response to topical steroids.
    - Diagnosis uncertain.
    - The patient is a child or a pregnant or breastfeeding woman.
    - There is a need for emotional support and/or a wig.

Useful resources for patients:
Websites (all resources are hyperlinked for ease of use in Red Whale Knowledge)

- Alopecia UK
- British Association of Dermatologists - alopecia areata
- British Association of Dermatologists - female pattern hair loss
- British Association of Dermatologists - male pattern hair loss

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