Alopecia (Acquired Hair Loss)

Definition / Supporting Information

Alopecia (hair loss) may be diffuse or partial, scarring or non-scarring, congenital or acquired. Congenital alopecia is described separately.

Essential History

Ask about:

- Onset of hair loss
- Changes in scalp skin such as:
  - Scaling
  - Itch (see Pruritus)
- Physical or emotional stress
- Stress on the hair from:
  - Braiding
  - Teasing
  - Other tightly pulled hairstyles
- Medications such as NSAIDs, sodium valproate*, amitriptyline hydrochloride, itraconazole, oral contraceptives
- General physical health
- Personal or family history of autoimmune conditions
- Family history of early male pattern hair loss

**If prescribing sodium valproate to a young person, be aware of the risks and ensure contraception is being used to protect against becoming pregnant. More information can be found on the Medicines for Children website.*

'Red Flag' Symptoms and Signs

Ask about:

- Features suggestive of systemic disease
  - Fever
  - Rash
- Recent weight loss
- Behavioural disturbance

Look for:

- Scarring hair loss.
  - Occurs when the hair follicles are irreparably damaged
  - Hair loss is permanent
    - Atrophic, shiny scalp often with areas of scale around follicles
- Evidence of any of the following associated with the hair loss:
  - Scale
  - Weeping
  - Crusting
  - Pustules
- If any of these are present to a significant extent, consider:
  - Tinea capitis or
  - Kerion

Differential Diagnosis / Conditions

Diffuse non-scarring alopecia

- Telogen effluvium
  - Occurs a few months after an illness, surgery or stressful event
  - Hairs go simultaneously into resting phase and are shed together analogous to moulting in animals
    - Regrowth occurs over a few months
- General ill health and nutritional deficiency
  - Chronic inflammatory conditions can be associated with hair thinning
  - Consider anaemia and iron deficiency
  - Rarely trace element deficiency can cause hair thinning
    - Acrodermatitis enteropathica
    - Malabsorption
- Endocrine disorders
  - Hyperthyroidism
  - Hypothyroidism
  - Hypopituitarism
  - Male pattern (androgenetic) hair loss
    - Occurs in both sexes
    - Thinner at the vertex and temples
    - Consider underlying endocrine abnormality (eg, polycystic ovary in girls if severe and onset unusually early)

Localised non-scarring alopecia

- Alopecia areata
  - Most often an acute problem
    - Sharply demarcated, round, nearly bald patches
    - Stubbly exclamation mark hairs
  - Patches tend to be several centimetres in diameter
    - Usually on the scalp
  - Prognosis depends on rate and extent of hair loss
  - Prognosis is worst in patients with:
    - Rapid total scalp hair loss (alopecia totalis)
    - Total body hair loss (alopecia universalis)

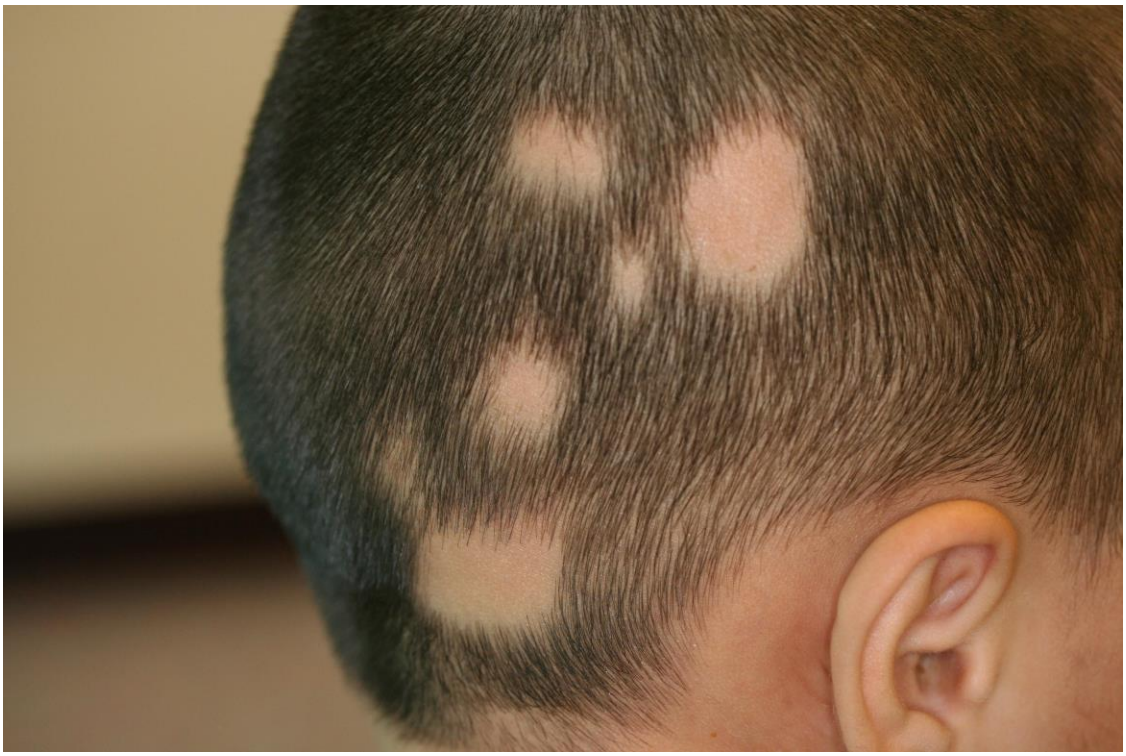

Figure 1: Alopecia areata

- Traction alopecia
  - Tight ponytails or braids causing chronic traction cause patchy hair loss
    - Can eventually develop into scarring alopecia
- Trichotillomania
  - Irregularly shaped areas of thinned stubble of varying lengths
    - Large, patchy, ill-defined patterns
    - Area of hair loss is most accessible to the probing hand
    - May simulate alopecia areata

  - Some children have a compulsive need to pull out their hair or even eyebrows or eyelashes
  - Patient may eat hair, which can accumulate in the stomach and form a trichobezoar (hairball)
  - May sometimes (but not always) provide a major clue to an underlying psychosocial problem

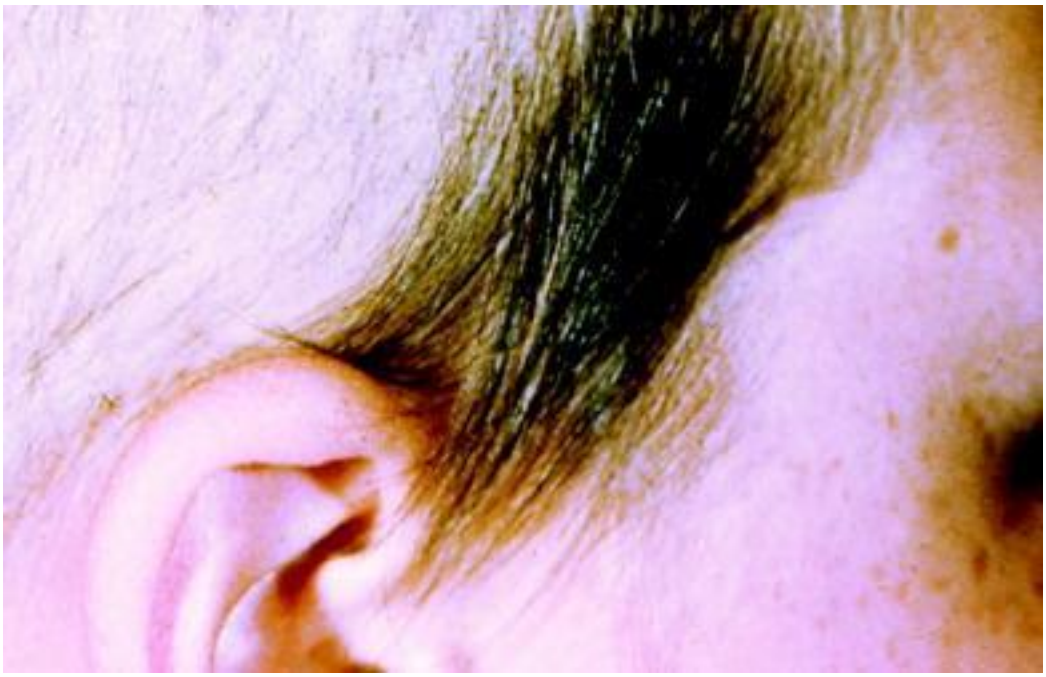

Figure 2: Trichotillomania

- Traumatic alopecia

Scarring alopecia (may be non-scarring initially)

- Tinea capitis and kerion
  - Tinea capitis
    - Mild: Round, minimally inflamed alopecic area with slight seborrhoeic scale or stubbly hair growth (non-scarring)
    - Severe: Boggy, tender often pustular, severely inflamed kerion
    - Kerion lesions tend to be:
      - More elevated than in other forms of tinea capitis
      - Characterised by black dots
    - Local adenopathy may be present (see Lymphadenopathy)

- Differential diagnosis includes:
  - Seborrhoeic dermatitis
  - Atopic dermatitis
  - Psoriasis
  - Bacterial infection

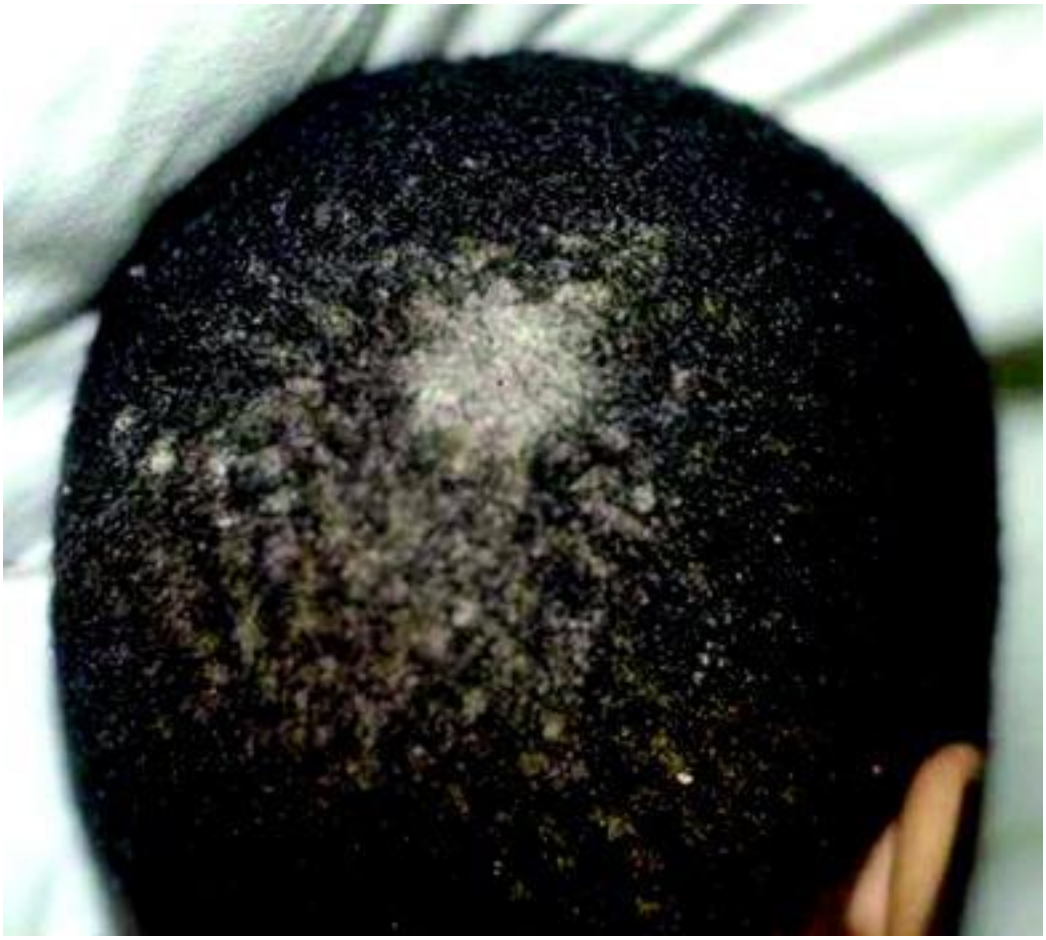

Figure 3: Tinea capitis

- Kerion
  - Delayed hypersensitivity reaction to fungus
  - If unchecked, resultant scarring interferes with the regrowth of hair
  - Early diagnosis and treatment are therefore helpful

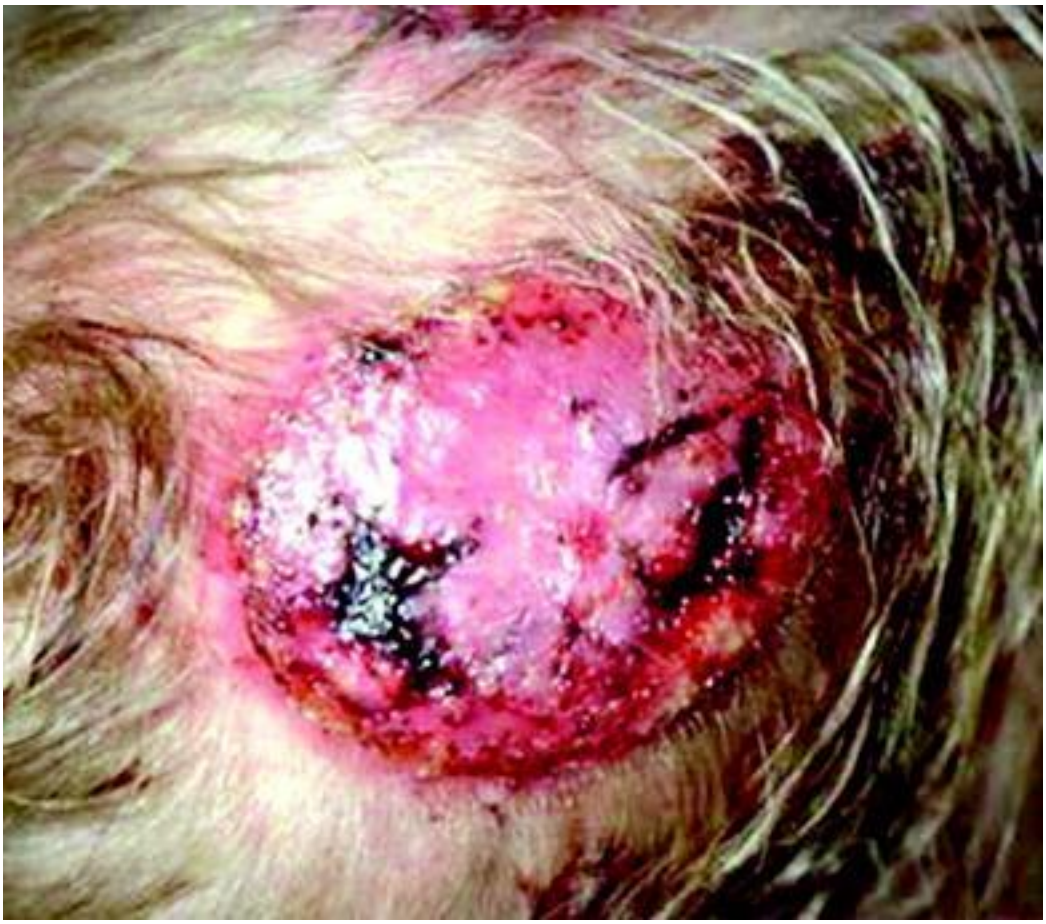

Figure 4: Kerion secondary to chronic progressive Tinea capitis

- Inflammatory skin diseases
  - Discoid lupus erythematosis
  - Lichen planus
  - Localised scleroderma (en coup de sabre morphoea)

Investigations

To be undertaken by non-specialist practitioners (eg, General Practitioner (GP) Team, usually with specialist advice), or specialist practitioners (eg, Emergency Department / Paediatric / Paediatric Dermatology Team(s)):

- Features suggesting significant underlying illness include:
  - Weight loss
  - Other systemic features
  - Failure of telogen effluvium to resolve
- These warrant further investigations including:
  - Full blood count and haematinic studies

  - Inflammatory markers (eg, C-reactive protein)
  - Urea, electrolyte and liver function tests
  - Thyroid function
  - Antinuclear antibodies
- Radiography (if indicated):
  - Trichotillomania
    - Presence of a trichobezoar
- Scrapings and hair pluckings for mycology if tinea capitis suspected

To be undertaken by specialist practitioners (eg, Paediatric Dermatology Team):

- Biopsy
  - Miniaturised anagen bulbs in androgenetic alopecia

Treatment Approach

Treatment depends on the underlying cause of alopecia.

To be undertaken by non-specialist practitioners (eg, GP Team, usually with specialist advice), or specialist practitioners (eg, Emergency Department / Paediatric / Paediatric Dermatology Team(s)):

- Treat iron deficiency if identified

Alopecia areata

- Treatment is of limited long-term benefit and may cause significant side-effects such as skin atrophy. Consider no treatment.
- Potent or very potent topical steroid
- Irritants or topical immunomodulators (specialist (Paediatric Dermatology Team) use only)
  - Used for extensive alopecia
  - Dinitrochlorobenzene immunotherapy
  - Psoralen with ultraviolet A light (PUVA therapy)

Trichotillomania

- Treatments unlikely to be successful if underlying emotional issue is not addressed
- Petroleum jelly may be applied to affected areas to deter pulling
- Imipramine hydrochloride (note that hair loss is also a potential adverse effect)
- Fluoxetine
- Surgery or endoscopy
  - Referral for removal of a trichobezoar

Tinea capitis

- Oral terbinafine (unlicensed but Children's BNF gives specific dose ranges for tinea capitis)

Lupus erythematosus

- Discoid variant
  - Early treatment with topical or intralesional steroids may prevent scarring
- Systemic variant
  - Loss of hair is generally temporary

Acrodermatitis enteropathica

- Oral zinc sulfate is the treatment of choice

Strategies for the patient to hide noticeable loss of hair:

- Psychological coping strategies
  - Consider referral to a service such as "Changing Faces" (available nationally)
- Headwear
- Plastic surgery
  - Expertise should be sought for consideration of hair transplants and scalp reduction (for scarred areas) when possible

When to Refer

Refer urgently to specialist practitioners (eg, Emergency Department / Paediatric / Paediatric Dermatology Team(s)) if:

- Features suggestive of systemic disease
  - Fever
  - Rash
- Recent weight loss

Escalate care to Paediatric Dermatology Team if:

- Rapid, diffuse hair loss
- Chronic, progressive, localised, or diffuse hair loss without regrowth
- Scarring alopecia
- Inability to grow hair as a result of:
  - Breakage
  - Loss
  - Abnormal texture of hair
- Appearance of scalp mass or plaque affecting localised hair loss
- Hair loss is causing significant psychological distress

Consider referral to Mental Health Services if emotional stress is believed to be underlying cause (eg, trichotillomania).

‘Safety Netting’ Advice

Advise families to seek further medical advice if:

- ‘Red flag’ signs or symptoms develop
- No improvement after 3 months
- Side-effects of terbinafine
- Provide advice on the use of sunblock and / or a hat to protect hair loss patches from sun damage

Patient / Carer Information

Please note: whilst these resources have been developed to a high standard they may not be specific to children.

- Alopecia areata (Web page), British Association of Dermatologists
- Children and young people (Web page), Alopecia UK
- Hair Loss (Web page), the NHS website
- Trichotillomania (Web page), the NHS website

Resources

National Clinical Guidance

Guidelines for the management of alopecia areata (PDF), British Association of Dermatologists

Alopecia areata (Web page), National Institute for Health and Care Excellence Clinical Knowledge Summary

Medical Decision Support

Lewis-Jones S, ed. Oxford Handbook of Paediatric Dermatology Oxford: Oxford University Press, 2010.

Suggested Resources

Please note: these resources include links to external websites. These resources may not have national accreditation and therefore PCO UK cannot guarantee the accuracy of the content.

Alopecia Areata, NICE clinical knowledge summary, National Institute for Health and Care Excellence.

Atton A, Tunnessen W. Alopecia in children: the most common causes. Pediatr Rev 1990;12:25–30. [PubMed]

Harrison S, Sinclair R. Optimal Management of Hair Loss (Alopecia) in Children. American Journal of Clinical Dermatology 2003;4: 757–70 [PubMed]

Price VH. Androgenetic alopecia in adolescents. Cutis 2003;71:115–121 [PubMed]

Roberts BJ, Friedlander SF. Tinea capitis: a treatment update. Pediatr Ann 2005;34:191–200 [PubMed]

Acknowledgements

Content Editor: Dr Doug Simkiss

Clinical Expert Reviewers: Dr Lindsay Shaw and Dr Lea Solman

GP Reviewer: Dr Ian A Dunn

AAP Reviewer: Jane Meschan Foy, MD, FAAP

Paediatric Trainee Reviewer: Dr Orode Omawunmi Ogun

Update Reviewer: Dr Surya Dhulipala (trainee paediatrician)

Paediatric Specialty Group: British Society for Paediatric Dermatology

Update information

Created: 2017

Date last updated: 2019

Next review due: 2022