Hair Loss - Alopecia Areata and Cicatrical Alopecia

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Alopecia Areata (AA)?

- Recurrent and non-scarring
- Can affect any hair-bearing area
- Occurs in different patterns

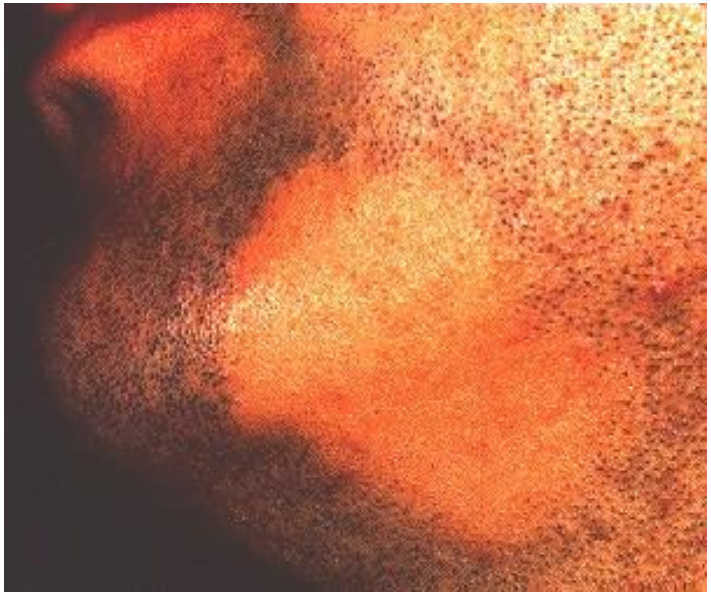
- Benign condition
- Most patients asymptomatic
- Emotional and pyschosocial distress

Alopecia areata (AA)

- Localized AA – Episodes of localized patchy AA (<50% involvement) which are usually self-limiting. Spontaneous regrowth occurs in most patients within a few months with or without treatment.

- Extensive AA - >50% involvement. These forms of AA less common. AA involving 40% hair loss is seen in 11% of patients.

AA Images



AA - Pathophysiology

- Remains unknown
- Most widely accepted theory is that AA is a T-cell mediated autoimmune condition that is most likely to occur in genetically predisposed individuals
- Positive family hx of AA – 10-20%
- Stressful events role remains unclear – most likely trigger a condition already present in susceptible individuals

AA - Aeitology

- Large study found that patients with AA also had autoimmune disorders and other comorbid conditions

- Thyroid disease – 14.6%
- Diabetes Mellitus – 11.1%
- Inflammatory bowel disease – 6.3%
- Systemic lupus erythematosus – 4.3%

AA - Prevalence

- General population – 0.1- 0.2%
- Lifetime risk of developing AA – 1.7%
- Ratio M:F = 1:1
- All races affected equally
- Peak incidence age 15-29 years (can occur at any age)

Clinical Presentation - History

- Natural history unpredictable
- Extreme variations in duration and extent of disease from patient to patient
- Most often asymptomatic
- 14% experience a burning sensation or pruritus in affected area
- Condition usually localized in first presentation
  - 80% - only single patch
  - 12.5% - 2 patches
  - 7.7% - multiple patches

Clinical Presentation - Physical

- Smooth, slightly erythematous or normal colored alopecic patches is charateristic
- Exclamation point hairs (hairs tapered to proximal end) – Pathognomonic but not always found.
- Positive result from the "Pull test" at the periphery of a plaque usually indicates active disease.

Differential Dignosis

- Androgenetic Alopecia
- Pseudopelade, Brocq
- Syphilis
- Telogen Effluvium
- Tinea Capitis
- Trichotillomania

Diagnosis – Work up

- Diagnosis can usually be made on clinical grounds.

- A scalp biopsy is seldom needed but can be helpful when the clinical diagnosis is less certain.

Treatment and Medication

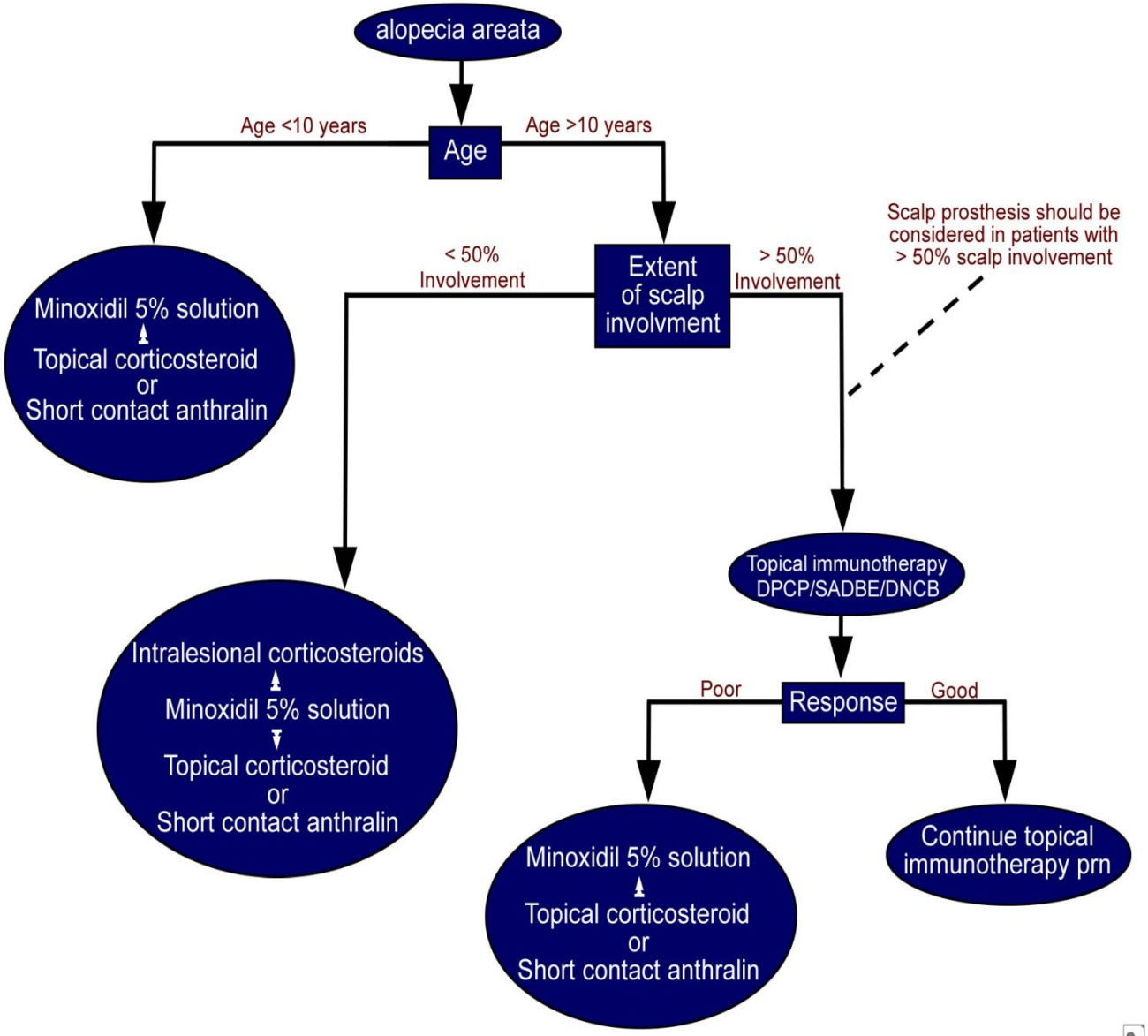
- Treatment is not mandatory, because the condition is benign, and spontaneous remissions and recurrences are common. Treatment can be topical or systemic.

- Corticosteroids
  - Intralesional corticosteroid therapy is usually recommended for alopecia areata with less than 50% involvement.

- Topical corticosteroid therapy can be useful, especially in children who cannot tolerate injections.

- Systemic corticosteroids (ie, prednisone) are not an agent of choice for alopecia areata because of the adverse effects associated with both short- and long-term treatment.

Treatment protocol for alopecia areata



Cicatricial (scarring) Alopecia

Refers to a collection of hair disorders that cause damage to the hair follicle and replace it with scarring so that there is irreversible hair loss.

Classification of Scarring alopecia

- Lymphocytes predominate
  - *Lichen planopilaris (LPP)*
  - *Central centrifugal cicatricial alopecia (CCCA)*
  - *Pseudopelade*
  - *Traction alopecia*
  - *Secondary systemic scarring alopecia*
- Neutrophils predominate
  - *Folliculitis decalvans*
  - *Perifolliculitis captis*
- *Mix of cell types predominate*
  - *Acne keloidalis*
  - *Acne necrotica*
  - *Erosive pustular dermatosis of the scalp*

Pathophysiology

- The aetiology for most forms od scarring alopecia are largely unknown
- Possible correlation between CCCA and diabetes?
- PPAR dysfunction in Lichen planopilaris?

Epidemiology

- Prevalence – 7%
- The prevalence of each type of scarring alopecia varies and is highly clinic dependant
- Prevalence studies – still lacking
- Traction alopecia and CCCA more commonly seen in African American population
- Lichen planopilaris more commonly seen in lighter-skinned patients
- Scarring alopecia predominantly affects females
- Age distribution has also not been well studied

Clinical Presentation - History

History findings for the different types of scarring alopecia include ;-

- Lichen planopilaris
  - Itching
  - Burning
  - Pain
- CCCA – slow onset of hair loss w/o symptoms
- Pseudopedlade -slow onset of hair loss w/o symptoms
- Traction alopecia -slow onset of hair loss w/o symptoms
- Alopecia mucinosa – Dyshidrosis and dysesthesia
- Chemotherapy alopecia - Tingling

Clinical Presentation - Physical

- A hair-pull test can assist in the evaluation of all types of alopecia.
- An excess of loose anagen hairs can be indicative of active disease.
- All types of scarring alopecia show loss of follicular ostia.
- This is most easily seen with a magnification light or dermatoscope.

Clinical Presentation - Physical

- Lichen planopilaris –
  - Perifollicular erythema, perifollicular hyperkeratosis, and scalp erythema. Extracranial disease (30% of patients). Signs of scalp inflammation can precede hair loss by many months
- Graham-Little syndrome –
  - Patchy cicatricial alopecia of the scalp, nonscarring alopecia of the axillary and pubic areas, and grouped spinous follicular papules that resemble lichen spinulosus or keratosis pilaris on the trunk and extremities.
- CCCA –
  - Start on the crown and spread centrifugally

Clinical Presentation - Physical

- Pseudopelade –
  - Small patches of scarring in the scalp
- Traction alopecia and trichotillomania –
  - Perifollicular erythema, scales, pustules, or a more subtle seborrheic picture
- Alopecia mucinosa –
  - Hair-bearing areas in the head and neck region are commonly involved. Alopecia, prominent follicles, and indurated plaques with fine scale.

Differential Diagnosis

- Alopecia Areata
- Alopecia Mucinosa
- Anagen Effluvium
- Androgenetic Alopecia
- Aplasia Cutis Congenita
- Sarcoidosis
- Syphilis
- Telogen Effluvium
- Tinea Capitis
- Trichorrhexis Nodosa
- Trichotillomania

Work up

- Laboratory Studies
  - Evaluate for potential mimics (syphilis)
  - Draw bacterial/fungal cultures (infection)
  - Rule out overlapping conditions (autoimmune or thyroid)
  - Problems with systemic correlation

- Scalp biopsy and dermatoscope evaluation
- Histological findings

Treatment and Management

- Involves a lot of damage and permanent hair loss.
- Treatment of scarring alopecia should be quite aggressive.
- The nature of treatment varies depending on the particular diagnosis.
- Scarring alopecias that involve mostly lymphocyte inflammation of hair follicles, (lichen planopilaris and pseudopelade) are generally treated with corticosteroids in topical creams and by injection into the affected skin. In addition, antimalarial and isotretinoin drugs may be used.

Treatment and Management

- For scarring alopecias with inflammation of mostly neutrophils or a mixture of cells, the typical treatment involves antibiotics and isotretinoin.

- More experimentally, drugs like methotrexate, tacrolimus, cyclosporin, and even thalidomide have been used to treat some forms.

- Once a scarring alopecia has reached the burnt-out stage and there has been no more hair loss for a few years, bald areas can be either surgically removed if they are not too big or the bald patches can be transplanted with hair follicles taken from unaffected areas.

Treatment and Management

- Stress and psychiatric morbidity are common considerations to evaluate. Often, consultation with a psychiatrist is of assistance but patients often refuse this suggestion.

- Sufficient levels of iron and protein in the diet may help promote normal hair growth.

Thank you