ALOPECIA AREATA

Background

1. Definition: non-scarring localized area of complete hair loss[1]
2. General Information:
    - characterized by rapid and complete loss of hair in round or oval patches on the scalp[5]
    - may extend to entire scalp (alopecia totalis) or entire body (alopecia universalis)[1,2]
    - size and number of patches and progress of disease can vary between people[2]

Pathophysiology

1. Pathology of Disease
    - Probably secondary to autoimmune reaction involving antibody, T-cell, and cytokine-mediated losses[1]
    - Trait appears to be polygenic[1]
2. Incidence, Prevalence
    - Affecting 0.1-0.2% of population, with men and women equally affected[1]
    - More than half of affected patients are younger than 20 yr[5]
3. Risk Factors
    - Autoimmune diseases such as Hashimoto thyroiditis, Addison disease, pernicious anemia, ulcerative colitis, myasthenia gravis, collagen vascular diseases, and vitiligo[1,5]
    - An increased incidence has been reported in patients with Down syndrome (5-10%)[1]
4. Morbidity / Mortality
    - Psychologically detrimental – loss of self-esteem, poor quality of life, anxiety, depression, social isolation

Diagnostics

1. History
    - Rapid and complete loss of hair in round or oval patches on scalp and possibly on other body sites[5]
    - Careful history and thorough physical examination usually suggest underlying cause of alopecia (SOR:C)[4]
2. Physical Examination
    - Non-scarring hair loss in patches[5]
    - Skin within plaques of hair loss appears normal[5]
    - Can be associated with atopy and with nail changes such as pits, longitudinal striations, and leukonychia[5]
3. Diagnostic Testing
    - Ancillary laboratory evaluation and scalp biopsy are sometimes necessary to make or confirm diagnosis (SOR:C)[4]
    - On microscopic evaluation, "exclamation-point" hairs are found, in which the proximal hair shaft has thinned but the distal portion remains of normal caliber[1]
    - A perifollicular infiltrate of inflammatory round cells is found in biopsy specimens from active areas[5]
4. Laboratory evaluation

- May consider testing for other autoimmune diseases as indicated by symptoms

5. Diagnostic imaging
    - None
6. Other studies
    - None

Differential Diagnosis

1. Key Differential Diagnoses
    - Seborrheic dermatitis, trichotillomania, traumatic alopecia, androgenetic alopecia, drugs and other chemicals, telogen effluvium (both acute and chronic), tinea capitis, traction alopecia[5]
2. Extensive Differential Diagnoses
    - Human immunodeficiency virus, hyperthyroidism, hypothyroidism, iron deficiency, nutritional deficiencies, secondary syphilis, systemic lupus erythematosus, trichotillomania[4]

Therapeutics

1. Acute Treatment
    - None
2. Further Management (24 hrs)
    - None
3. Long-Term Care
    - No good trial evidence that any treatments provide long-term benefit to patients[2]; however, may be indicated to improve self image
    - Due to likelihood of spontaneous remission and lack of evidence of effectiveness for medical intervention, no treatment generally recommended (SOR:C)[3]
    - The treatment of choice in patients older than 10 years-old, with patchy alopecia areata affecting less than 50 percent of the scalp, is intralesional corticosteroid injections (SOR:C)[1,3]
        - Triamcinolone acetonide (Kenalog), 0.1mL diluted in sterile saline to 10 mg per mL, is injected intradermally at multiple sites within affected area to maximum dosage of 2 mL per visit[1]
        - Can return for intralesional corticosteroid injections no more often than every four to six weeks[1]
        - Intralesional steroids should be discontinued after six months if no improvement noted[1]
        - The main side effect, atrophy, can be minimized by not injecting too superficially and by limiting volume per site and frequency of injection to no more often than every four to six weeks[1]
    - Topical immunotherapy (i.e., contact sensitizers) most effective treatment option for chronic severe alopecia areata (SOR:C)[1,3]
    - Many other agents have been used to treat alopecia areata, including minoxidil (Rogaine), psoralen plus ultraviolet A (PUVA), anthralin (Anthra-Derm, Dritho-Scalp, Micanol), and topical contact sensitizers such as diphenylcyclopropenone (DPCP)[1,6]
        - Anthralin, an anti-psoriatic, in combination with topical corticosteroids and/or minoxidil, is a good choice for use in children and those with extensive disease

- It is relatively easy to use and clinical irritation may not be required for efficacy[1]
- Anthralin cream (0.5%-1.0%) may be applied overnight or as short contact therapy, initially for 5 to 10 minutes, increasing up to 1 hour[6]
- New hair growth can be noted after 3 to 4 months[6]

▪ With DPCP therapy, increasing strengths must be used,
- Cosmetically acceptable regrowth can be seen in up to 60% of patients[6]
- Side effects include irritation, regional lymphadenopathy, and postinflammatory dyspigmentation[6]

o Systemic corticosteroids not recommended due to inadequate evidence of efficacy and potentially serious side effects[3]
o Side effects range from erythema, mild-to-moderate burning, skin erosions, and itching with topical treatments to weakness and weight gain with oral corticosteroids[3]
o A wig may be considered (SOR:C)[3]
o Hairpieces and transplants may be the only options available for persons with severe disease that remains unresponsive to available medical treatments[1] (Locks of Love)

Follow-Up

1. Return to Office
   - Return for steroid injections every 4-6 weeks
2. Refer to Specialist
   - Patients with recalcitrant, recurrent, or severe disease should be referred to dermatology or similar speecialist[1]
3. Admit to Hospital
   - None

Prognosis

1. Most cases of alopecia areata involve scattered patches of hair loss, which will spontaneously remit within a year[1,3]
2. New hair growth may initially be of finer caliber and lighter color, but replacement by normal terminal hair usually can be expected[5]
3. Response to treatment ranges from 40-60% for severe alopecia areata, but only approximately 25% for alopecia totalis and alopecia universalis[1]
4. No guarantee that any hair regrown during treatment will persist once treatment is finished[2]
5. Patients with the following have a worse prognosis[1,3]
   - family history of alopecia areata,
   - severe hair loss,
   - history of atopic or autoimmune disease,
   - Down syndrome,
   - onset of symptoms before puberty,
   - condition persists longer than one year

Prevention

1. None

Patient Education

1. http://www.aafp.org/afp/2003/0701/p107.html
2. http://www.naaf.org/site/PageServer
3. http://www.mdconsult.com/das/patient/body/302890540-3/1234634884/10041/33710.html

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7. Kalabokes, VD. Alopecia areata: Support groups and meetings - how can it help your patient? *Dermatol Ther* - 01-MAY-2011; 24(3): 302-4.
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