Understanding Alopecia Areata: a Deep Dive into Psychosocial Burden

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Disclosures

- none

Massachusetts Democratic Representative: Ayanna Pressley

2018 Reveals Alopecia Areata Totalis diagnosis

Epidemiology of Alopecia Areata

- Lifetime incidence of 2%
- Affects males and females equally
- More prevalent in children
- 40% of patients, first AA manifestation by age 20
- Autoimmunity: T cell abnormality

Clinical manifestations

Patchy alopecia	Alopecia totalis	Alopecia universalis	Ophiasis: occipital and temporal hair loss
Inverse ophiasis(sisaipho): central hair loss, lat/post scalp spared	Alopecia barbae	AA of nails: nail pits, trachyonychia, red lunula, longitudinal ridging, onychomadesis, onycholysis, onychorrhexis	Diffuse AA(AA incognita): diffuse hair loss

The AA Hair Follicle:pathogenesis

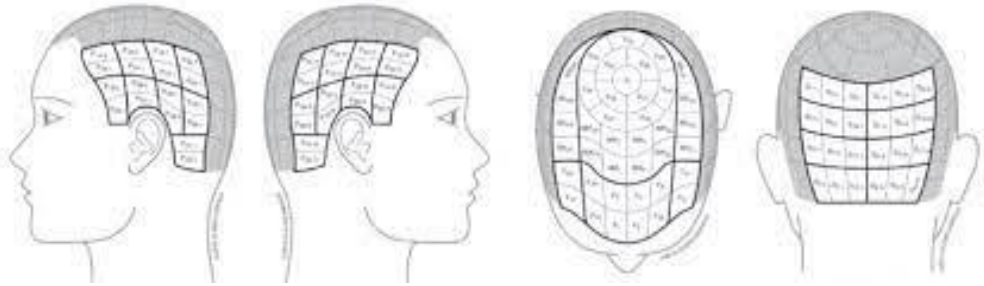
- Collapse of bulb immune privilege of the anagen hair follicle is driver of AA
- Follicular ostia still present usually
- Anagen effluvium in acute onset so breakage and 24-hour 2inch spot of hair loss can appear(failure to reenter catagen phase)
- Triggering factors of this collapse occur in genetically susceptible indiv. include:
  - Emotional and physical stress
  - Environmental trigger:
    - Viral infection
    - Selenium deficiency
    - dust mites
    - Hair follicle trauma
- Other triggering factors:
  - Suppress immune priv. guardian expression
  - Contribute to IP collapse
  - Activate innate immune system via NKG2D cells=INF-gamma production and MHC class I upregulation(proinflammatory cytokines) that further breakdown IP (cycle)
- Inflammatory perifollicular infiltrate="swarm of bees" attacking bulb region(bulge area spared allows hair regrowth)
  - CD8+ and CD4+ helper T cells
  - Mast cells
  - NK cells
  - Dendritic cells

Screening for Co-morbidities

Autoimmune disorder history(note any family hx of AA):	Atopy:	Psychiatric disorders:	Other:
• Thyroid dz • Vitiligo • Lupus erythematosus • Rheumatoid Arthritis • Psoriasis	• Atopic derm • Allergic rhinitis • Allergic conjunctivitis • asthma	• Anxiety • depression	• Iron Deficiency anemia • Vitamin D deficiency • Metabolic syndrome

Assessing disease severity: Clinimetric(clinical extent) and Psychometric (QoL)

- SALT score calculation: scalp divided into 4 quadrants (S1 <25%, S2=25-49,S3 50-74, S4 75-100%
  - Left 18%
  - Right 18%
  - Top 40%
  - Back 24%



- Anatomical site identification
- SALT Score alone doesn't predict QoL:
  - Women rate severity higher
  - Skindex-16AA domain and total scores:
    - Symptoms 4 ITEMS, emotions 7 ITEMS, functioning 5 ITEMS

Senna et al.*J Invest Derm. 2022;142(10):2624-60*

SKINDEX-16:
PSYCHOMETRIC MEASURES/QOL(0-100%)

Symptoms domain

Itching

Burning or stinging

Pain

Skin irritation

Emotional domain

Persistence/recurrence

Worry

Appearance

Frustration

Embarrassment

Being annoyed

Feeling depressed

Functional domain

Effects on interactions with others

Effects on desire to be with people

Difficult to show affection

Effects on daily activities

Hard to work or do enjoyable activities

*__Never bothered__ *Rarely bothered * __Sometimes__ *Bothered most of the time *__Always bothered__

Holistic Assessment of AA severity

AA severity	% Scalp Hair Loss
Mild	≤20
Moderate	21-49
Severe	50-100
If mild or moderate increase AA severity rating by 1 level if ≥1 present:	

- noticeable involvement of eyebrows or eyelashes
- Inadequate response after at least 6 mos Tx
- Diffuse(multifocal) positive hair pull test c/w rapidly progressive AA
- Negative impact on psychosocial functioning due to AA

King, B. *Dermatol Ther*. 2022;12:825-34

King, B. *NEJM*. 2022;386(18):1687-99

Eyelash/Eyebrow Assessment Tools

- ClinRO measure 0-3
  - Score 0=Eyelash/brow coverage normal
  - Score 1:min gaps in brow/lash hair, distrib even
  - Score 2:signif gaps in brow/lash hair, uneven distrib
  - Score 3= no lash/brow
- EBL and ELA(0-3):
  - Score 0=no eyelash/brow
  - score 3 normal lash/brow
- Beta and Bella (0-3):
  - Score 0=eyebrow/eyelash absent
  - Score 3=normal brow/lash

The Psychosocial Burden

- AA Unpredictable prognosis:
  - Relapses and remissions common
  - Frequently chronic course
  - high relapse if discontinue treatments
- Chronic course leads to
  - compromised quality of life
  - Depression
  - Anxiety
- Need to address psychosocial aspect of disease in order to implement appropriate psychological support
- Affects scale of disease severity (mild, moderate, severe)

Study King et al. 21min

Okhovat et al. Assoc btwn AA, anxiety, and depression: A systematic review and metanalysis. *JAAD*, June 2019;88(5):1040-50

AA Disease Severity Assessment

Pattern of hair loss:
*Prominent, patchy, sisaipho, ophiasis, progressive totalis

Location of hair loss:
Scalp, eyebrows, eyelashes, beard, nasal, genital

Nail involvement:
Fingernails, toenails, pitting, trachonychia, ridging, red spots

Duration:
First onset, current duration <12mos, childhood onset, current duration >12 mos, current duration > 8yrs

Impact of QoL:
Physical consequences, daily activities, relationships, self-esteem, depression, suicidal ideation

Extent of hair loss:
SALT bands or AA-IGA bands

Previous Treatment Response:
Response to topicals systemics, inadequate response, relapse on treatment

King, B. *Dermatol Ther.*2022;12:825-34

Prognostic Features

- 50% spontaneous remission within one year
- Worse prognosis patterns:
  - Ophiasis
  - Totalis or universalis
  - Nail involvement
  - Early age of dz under 6
  - Family h/o AA
  - Severity at onset of dz
  - Long standing 6-12 weeks or more

Quality of Life Tools

QOL: Domains

Symptoms
Functioning /Activity limitations
emotions

Tools include:

Skindex-16
AAPPO(AA Pt Priority Outcomes)
AASIS(AA Symptom Impact Scale)

King, B. *JAAD*. 2022;87:306-13
Chernyshov,PV *J Eur Adcad Dermatol Venereol.* 2021;35:1614-21

PATIENT SURVEY:
216 people with median duration AA 13 yrs

- 85% said coping with AA was daily challenge
- 78% worried others would find not find them attractive
- 69% anxious in social situations
- 62% made different major life decisions as result of AA
- 56% worried about hair regrowth
- Deep depression-SERIOUS IMPACT MENTAL AND PHYSICAL
- Affects everyone in the AA patient orbit!

MESINLOVSHJA, ET AL. *J INVEST DERMAT.* 2020;20:S62-8

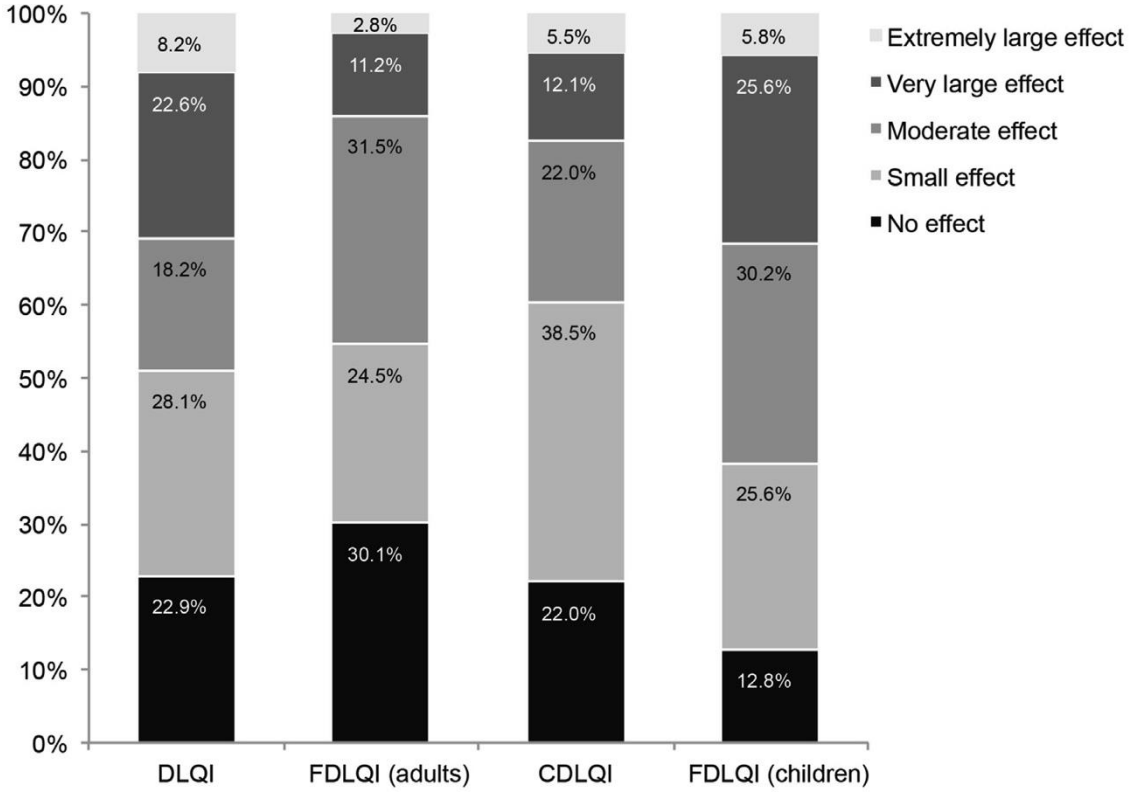
AA impacts Socialization and Lifestyle

- Social avoidance and isolation due to feeling ashamed
- Self-confidence reduced, feeling of hopelessness
- Camouflaging with AA:
  - Physical discomfort-wig itchy or hot
  - Cost
  - Longer morning routine
  - Anxiety about AA being exposed or noticed
  - Feeling unattractive without camouflage

Davey et al. *Br J Dermatol* 2019;10(6):1377-89

Impact of AA Beyond the Patient

*Figure 1:



- Qol affects not only adults and children with AA but their family members as well:
  - 292 adults, 91 children, and 229 family members
- Affects everyone in AA patients orbit
- Consider Mindfulness, Self Compassion training

*Liu, King, Craiglow Alopecia areata is associated with impaired health-related quality of life: a survey of affected adults and children and their families.JAAD. 2018;79(3):556-8

Kishmoto et al. Efficacy of Integrated Online Mindfulness and Self-compassion Training for Adults with Atopic Dermatitis.*JAMA Derm.*2023;159(6): 628

Treatment options: but relapse is high

1. **Intralesional corticosteroids** first line for patchy AA, or combined with topical corticosteroids
2. **Oral corticosteroids** if SALT >30%
3. **DPCP** (diphenylcyclopropenone) topical sensitization for >2y extensive AA, AT, AU
4. **Anthralin** in kids with severe AA, instead of DPCP, fewer side effects
5. **Methotrexate** for severe AA or >12yo
6. **JAK inhib**: block JAK enzymes and downstream signaling of cytokines
   - IFN-gamma, IL-15 promote inflam loop and are JAK mediated
7. **Exosomes**
   - growth factors, microRNA and mRNA
8. **Oral Zinc and vitamin D** supplement controversial
   - Zinc 50-100mg/day immun effects
   - Vit D 2000mg/day, most low

Guiding Your AA Patient

- Discuss disease in detail
- Coping with AA is a daily challenge
- Discuss all treatment options and review response to previous theraqpies
- Consider alternatives and holistic approach:
  - shaving head (easier in men)
  - wigs
  - hair follicle powders
- Consider Psychosocial impact: address referral needs to psychologist or psychiatrist
- Follow up with patient regularly
  - If undergoing treatment see monthly
  - If in remission, still follow up quarterly
- AA support organizations for patients with severe AA, pediatric patients, and parents (National Alopecia Areata Foundation, and local support groups)

Summary

- Coping with AA is a daily challenge for patient and family members
- Important to evaluate patient using Holistic Assessment Grading: wholistic approach:
  - Affected Sites
  - Psychosocial impact
  - Duration hair loss
  - Response to previous therapies
- Have discussion and include family members at one or all of the visits with patient
- Important to discuss all treatment options including mindfulness, self compassion

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