New Patient Hair Loss: Now What?

Melissa Piliang, MD
Cleveland Clinic
Dermatology and Pathology
Conflict of Interest

• No relevant conflicts
• Investigator for Samumed, Kythera, Incyte, Concert, Allergan
• Advisory Board/Consultant: Samumed, Castle Biosciences, Proctor and Gamble
Outline

• Psychological effect
• History and physical
• Laboratory work-up
• Biopsy
• Clues for specific diagnosis
Introduction

• Common:
  • By menopause about ½ of women experience hair loss
  • Incidence increases with age

• Psychologically distressing:
  • Women feel it is unnatural for their hair to thin
  • Very concerned ‘something is wrong’
  • Despite high prevalence, feel they ‘are the only one’

• Limited treatment option:
  • Poorly studied
  • Mildly efficacious at best
  • Unpredictable response
Psychologic Effect

- Leads to high levels of stress, anxiety and social effects
- Women with FPHL:
  - Had more negative body image
  - A pattern of less adaptive functioning
  - 55% of patients who had FPHL displayed symptoms of depression (vs. anxiety, aggressiveness or hostility in men)
- Treatment of hair loss produced an improvement in 89% of women and 76% of men

Hair Disorders

• **Non-scarring**
  • Telogen effluvium (TE)
  • Female pattern hair loss (FPHL)
  • Male pattern hair loss (MPHL)
  • Alopecia areata (AA)

• **Scarring**
  • Lichen planopilaris (LPP)
  • Discoid lupus erythematosus (DLE)
  • Central centrifugal cicatricial alopecia (CCCA)
  • Folliculitis decalvans, DCS, folliculitis keloidalis
Clinical Evaluation

- **History is paramount**
  - Complaint
    - Shedding, thinning, breaking, not growing
  - Onset
  - Associated Symptom
    - Itching, burning, scaling, pain
  - Hx of Prior Hair loss
  - Non-scalp (eyebrows, lashes, body hair)
  - Excess body/Facial Hair
Important Points in the History

• Women
  • Menstrual History
  • Contraceptive and HRT
  • Fertility
  • Recent pregnancy
  • Menopause
  • Acne/hirsutism

• Weight change & exercise habits
  • Crash diets, elimination diets
  • Weight loss surgery
  • Exercise type and frequency

• Psychological stress
  • Divorce, family deaths, job

• Illness:
  • Surgery
  • Fever, Hx of chronic disease, malignancy, infection, autoimmune, liver or renal disease

• Medications
  • Prescription
  • Herbals & OTCs

• Family History:
  • AGA – men or women
  • Alopecia areata
  • Autoimmune diseases (thyroid)
  • Estrogen-dependent cancers
Clinical Evaluation

• Hair grooming
  • Hair Type (long, medium, short, fine, course, wavy)
  • Hair Color
  • Hair Care
    • Frequency of coloring, blow-drying, relaxer, flat iron, comb, rollers, perm, extensions, wig, braids
Physical Exam

- General appearance
  - Body Habitus
  - Mood/energy
  - Hair density
Physical Exam

• Scalp
  • Erythema
  • Scale
  • Part Width
Physical Exam

- Scalp
  - Erythema
  - Scale
  - Follicular papules
  - Pustules
  - Part width
  - Bald patches
  - Scar
Physical Exam

- Hair Fibers
  - Broken
  - Chemical processing – color/perm
  - Hair pull
Hair Breakage

• Periphery and central scalp
• Report hair ‘shedding’ or not growing
• One harsh perm with scalp burning
• Chronic use of perms
Physical Exam

• Nails

Hypothyroidism

Alopecia Areata
Wood’s light

- Highlight Malassezia
- Hypopigmentation

Frontal Fibrosing Alopecia

Seborrheic Dermatitis
Dermoscopy

Lichen planopilaris

Video Dermoscopy

Handheld
Dermoscopy

Lichen Planopilaris


Alopecia areata

Tosti and Torres. Actas Derm 2009
Scalp Biopsy

- Two punch specimen
  - Vertical
  - Horizontal
- One punch specimen for DIF

P. Foliaceous

AGA – follicular miniatruization
Scalp Biopsy

Lichen Planopilaris

Frontal Fibrosing Alopecia
Scalp Biopsy
Folliculitis decalvans (and other inflammatory alopecias)
Scalp Biopsy - ACD
Hair Mount
Scanning EM

Uncombable hair syndrome (pili trianguli et canaliculi)
Bacterial and Fungal Culture

- Pustules
- Scale
- Pain
- Drainage

Folliculitis Decalvans with staph colonization
Laboratory Evaluation

• General Health
  • CBC
  • CMP

• Nutritional
  • FERRITIN
  • ZINC
  • VITAMIN D

• Hormonal
  • TSH

• Others (as indicated)
  • Autoimmune - lupus
    • ANA
  • AA/LPP/FFA
    • MICROsomAL AB
  • Androgen Excess
    • DHEAS
    • TESTOSTERONE (FREE & TOTAL)
    • SHBG
    • HgA1C
  • Vegetarian/heavy menses/anemia
    • Iron studies
Common Alopecias

NON-SCARRING

- Telogen Effluvium
- Patterned alopecia
  - Androgen excess
  - Dysmetabolic syndrome
- Alopecia areata
- Trichodystrophies
  - Acquired
  - Congenital
- Senescent alopecia

SCARRING

- Lichen planopilaris
- CCCA
- Folliculitis decalvans
- Dissecting folliculitis
- Lupus erythematosus
Telogen Effluvium

- Shedding in excess of the normal 10% on a daily basis
  - 200-500 hairs per day
- Numerous triggers (3-6 months prior to onset of hair loss)
- Non-scarring
- Can unmask androgenetic alopecia
Hair Collection
Common Triggers

- Stress
  - Job
  - Divorce
  - Death in family

- Medication
  - Almost any

- Post partum

- Surgeries
  - Excessive blood loss
  - Prolonged anesthesia

- Illness
  - Fever
  - Prolonged recovery

- Weight loss
  - Extreme diets
  - Rapid
  - Weight loss surgery

- Nutritional Deficiencies
  - Iron
  - Vitamin D
  - Zinc
Shedding Pattern - Triggers

Often multiple triggers

**Acute vs chronic telogen effluvium (shedding)**

- **Acute shedding**
- **Chronic shedding**

- 20% to 30% increase in diffuse hair loss by 2 to 3 weeks after trigger

- Normal hair loss ≈100 hairs per day

- Increase in normal hair loss
- Initial trigger
- New trigger
- New trigger
- New trigger

- Time course

**Genes**
**Cytokines**
**Stromal**
**Metabolic**
**Endocrine**
**Hormones**
**Androgens**
**Medications**
**Systemic disease**
**Stress**
Androgenic Alopecia

- Follicular miniaturization - Hair follicles progressively smaller with each anagen
- Anagen phase shortens
- Proportion of hairs in telogen increase (10->20%)
  - May note increased shedding
- Loss of follicles, replaced by fibrous tracts
- Process driven by:
  - Testosterone
  - Age
  - Genetics
Polycystic Ovary Syndrome

• ~10% of woman
• Variable definitions
  • Irregular menses
  • Infertility
  • Cysts on ovaries
  • Acne
  • Hirsutism
  • Metabolic syndrome
  • Acanthosis
Work-Up - PCOS

• Evaluate for androgen excess
  • DHEAS
  • Testosterone – free and total
  • Fasting blood glucose
  • HbA1C

• Others:
  • Sex hormone binding globin
  • Androstenedione
  • 24 hour urine cortisol
  • Prolactin

• Ovarian Ultrasound
  • Selective patients
Nota bene

• Diffuse, rapid onset is uncommon in AGA

• Should raise suspicion for:
  • Systemic illness:
    • Nutritional deficiency (iron, vitamin D, zinc)
    • Thyroid disease
    • Syphilis
    • Medication exposure
    • Malignancy (ovarian, elevated androgens)
  • Autoimmune etiology
    • Lupus
    • Alopecia Areata – diffuse type
Alopecia Areata

Associated with Hashimoto’s thyroiditis, atopic dermatitis, diabetes, vitiligo
Diffuse Pattern Alopecia Areata

• Diffuse thinning
• Look for background patchiness
• Clues:
  • Loss of facial/body hair
  • Nail changes
  • Rapid onset
• Biopsy key to diagnosis
Cicatricial Alopecia - Overlap

Inflammatory and Scarring Alopecic Disorders

- Folliculitis Decalvans
- AK
- Dissecting Cellulitis
- Pseudopelade
- Pseudopelade of Brocq
- CCLE/DLE
- CCSA
- FAPD
- LPP
- FFA

Modified Sperling, Arch Dermatol 2000
Lichen Planopilaris

• Uncommon lymphocytic scarring alopecia

• 2-8% of all visits to hair clinics

• 40% of scarring alopecias

• Pain, pruritus, burning

• Bright red erythema
Clinical Variants

- Classic LPP
- Frontal fibrosing alopecia
  - Scalp, face, body
- Graham-Little-Piccardi-Lassueur
  - Cicatricial alopecia
  - Lichen planus
  - Non-scarring loss of axillary and pubic hair
Subtle scarring – confused with AGA, alopecia areata, traction alopecia

Frontal Fibrosing Alopecia

Progressive band-like alopecia
Frontal hairline
Inflammatory papules at hairline
Eyebrow involvement
CCCA

- Central Centrifugal Cicatricial Alopecia (CCCA)
  - Scarring hair loss common in black women
  - Begins on vertex (top) of scalp
  - Very difficult to treat
  - Hair care (hot comb/relaxers/braids??)
Summary

• Work up
  • Thorough
  • Detailed
  • Directed

• Empathetic Approach

• Overlaps
Thank You

pilianm@ccf.org