New Patient Hair Loss: Now What?

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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

Seborrheic Dermatitis

Frontal Fibrosing Alopecia
Dermoscopy

Lichen planopilaris
Dermoscopy

Lichen Planopilaris

Alopecia areata


Tosti and Torres. Actas Derm 2009
Scalp Biopsy

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

AGA – follicular miniaturization

P. Foliaceous
Scalp Biopsy

Lichen Planopilaris

Frontal Fibrosing Alopecia
Scalp Biopsy
Folliculitis decalvans (and other inflammatory alopecias)
Scalp Biopsy - ACD
Hair Mount
Uncombable hair syndrome (pili trianguli et canaliculi)
Bacterial and Fungal Culture

- Pustules
- Scale
- Pain
- Drainage

Folliculitis Decalvans with staph colonization

Tinea Capitis
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

Increase in normal hair loss

Initial trigger

New trigger

New trigger

New trigger

Time course

Normal hair loss
≈ 100 hairs per day

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

- 5-10% of women
- 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

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
• Empathetic Approach
• Overlaps
Thank You

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