

Pigment and Hair disorders

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OBJECTIVES

I. Pigment Disorders

Basic anatomy and physiology of pigment cells

Vitiligo

- Pathology, clinical presentation, needed investigations, treatment and prognosis.

Albinism

- Pathology, clinical presentation, management, and complications

Melasma

- Causes, clinical presentation and management.

II. Hair Disorders

- Basic anatomy and physiology of hair and hair cycle.
- Differences between scarring vs. non-scarring alopecia.

Androgenetic Alopecia

- Male and Female Presentation
- Pathophysiology and the role of 5 alpha reductase.
- Medical Treatment
- Surgical Treatment

Alopecia Areata

- Clinical presentation
- Types
- Treatment

Anagen Effluvium

- Cause, presentation

Telogen Effluvium

- Causes , Investigations and treatment

Trichotillomania

- Clinical presentation and treatment

Tinea Capitis

- Clinical presentation, diagnosis and treatment

Chronic Discoid Lupus

- Clinical Presentation and complications

Hirsutism

- Difference from hypertrichosis
- Causes of hirsutism
- Investigations: when to do it and what?
- Treatment

Hypertrichosis

- Causes and treatment

Pigment disorders

- Classification:

Hypo , hyper or depigmentation

- Vitiligo
- Albinism
- Melasma

✓ Introduction to skin pigment



Vitiligo

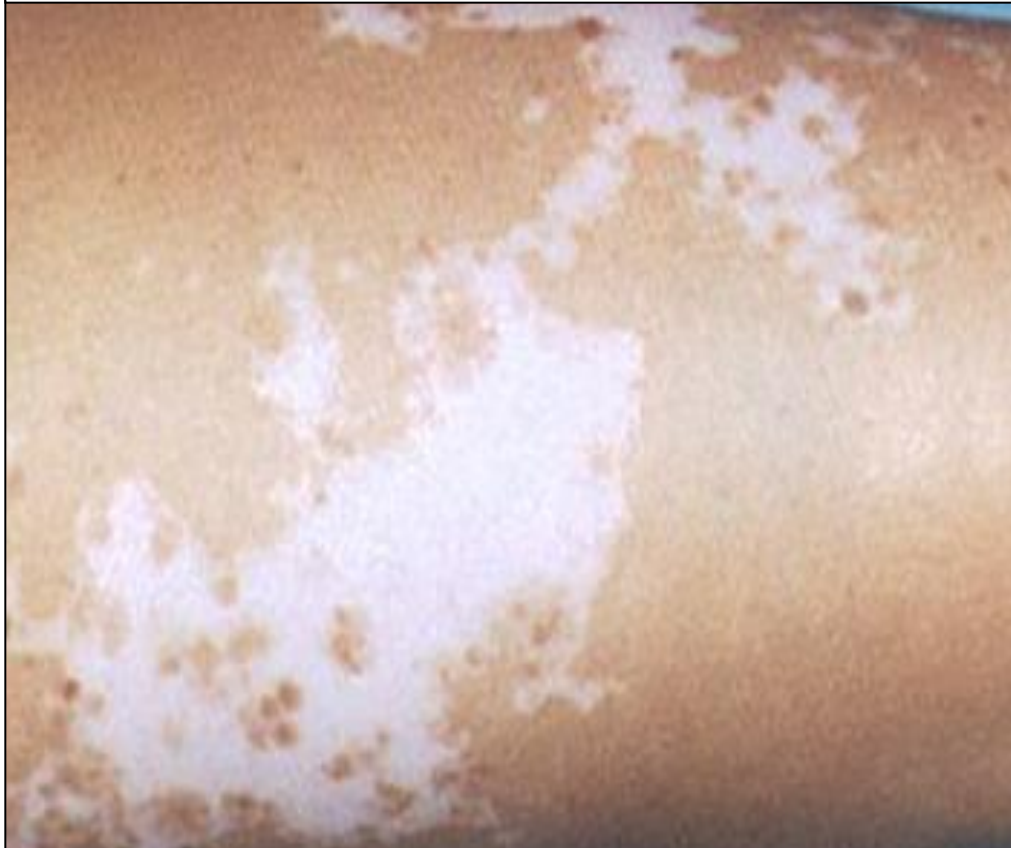


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✓ **Definition**

✓ **Types:**

focalis

segmentalis

vulgaris(generalized)

universalis

- ✓ **Pathogenesis:**
autoimmune
- ✓ **Associated diseases**
- ✓ **Prognosis**
- ✓ **Psychosocial effects**

Treatment

- **Skin camouflage**
- **Topicals: Corticosteroids**
 - Immunomodulators**
 - Outdoor topical psoralen**
- **Phototherapy:**
 - 1. UVA + Psoralen = PUVA**
 - 2. NBUVB**
 - 3. Excimer laser**



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➤ **Systemic Treatment:**

➤ **Surgical Rx:**

Conditions:

types:

.tissue

.cell

➤ **Depigmentation**



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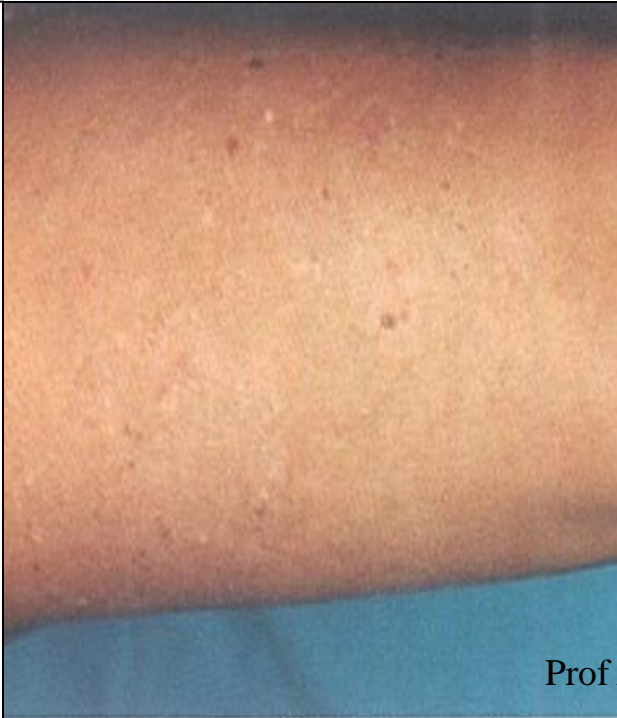
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SBG



STG



Albinism

- autosomal recessive disorder
- lack of pigment production by melanocytes in the epidermis, hair bulb, and eye.
- skin is white or pink
- the hair is pale blonde
- iris is translucent.



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Albinism

- Sunlight is very poorly tolerated, and sunburn and photophobia are common symptoms.
- Nystagmus
- Albinism is a serious condition.WHY?
- skin ages prematurely
- high incidence of malignant skin tumors.



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Albinism pathology

Melanocytes are present in the basal layer of the epidermis

- tyrosinase negative albinism
- tyrosinase positive albinism

management

Sun Avoidance

Total Sunblock

Regular clinical review for early diagnosis of skin tumours.

Children with ocular albinism may have learning difficulties due to poor vision and require specialist ophthalmological supervision.

Chloasma (Melasma)

- hormonally stimulated increase in melanogenesis
- mainly affects the face
- seen in pregnant women and those on the contraceptive pill.
- Sunlight and Oral contraceptive will aggravate the situation

Treatment:

Sunscreen

Bleaching creams

Chemical peeling



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HAIR DISORDERS

- HAIR LOSS(alopecia)

alopecia areata

androgenetic alopecia

telogen eff.

anagen eff.

trichotillomania

- HAIR EXCESS

hirsutism

hypertrichosis

Introduction & definition

- ✓ Alopecia = **HAIR LOSS**
- ✓ Basic hair anatomy and Physiology
- ✓ Hair growth is very dynamic
- ✓ Vellus and Terminal hair

✓ **How many hairs in the body?**

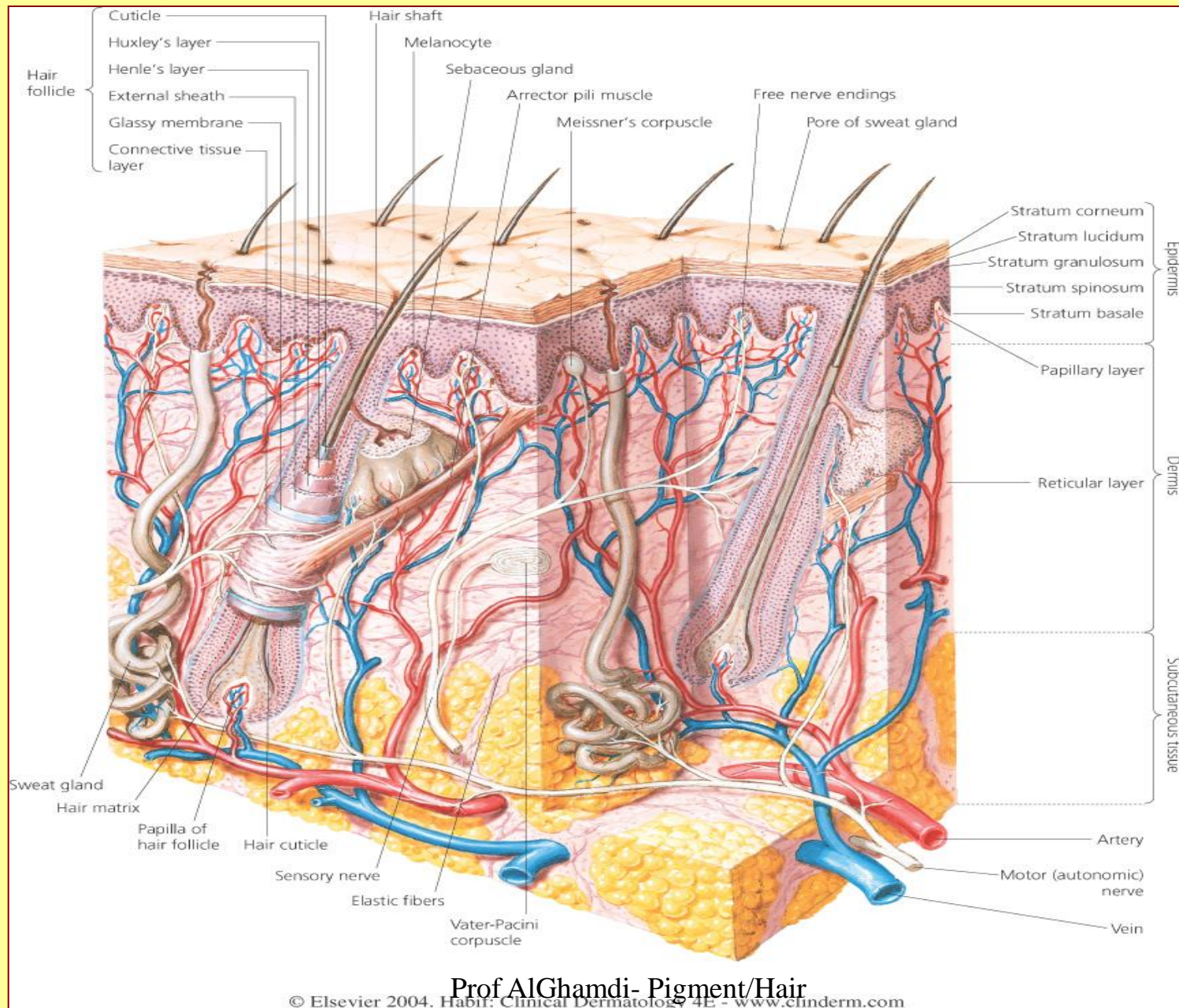
5 millions hairs;

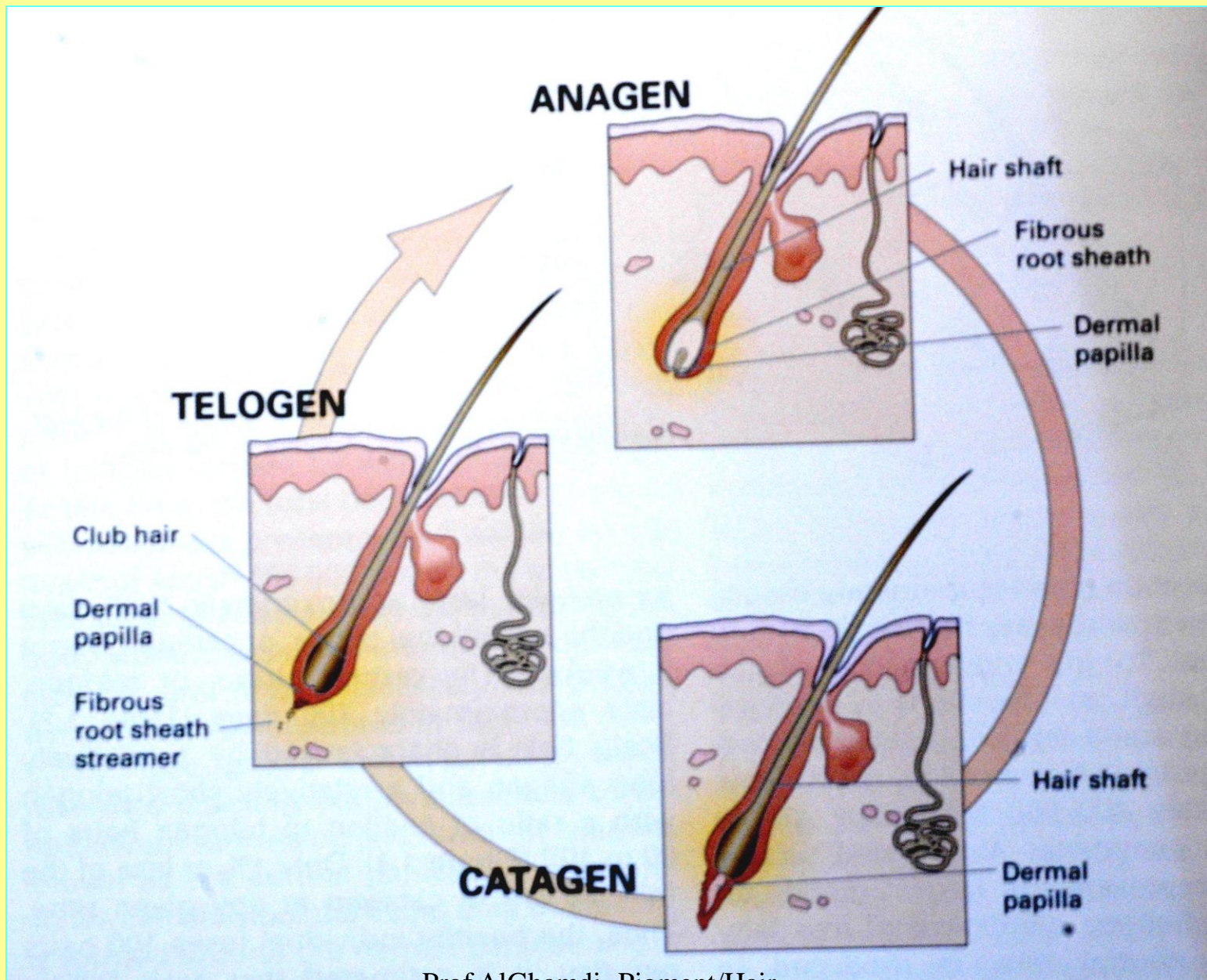
100,000 in the scalp

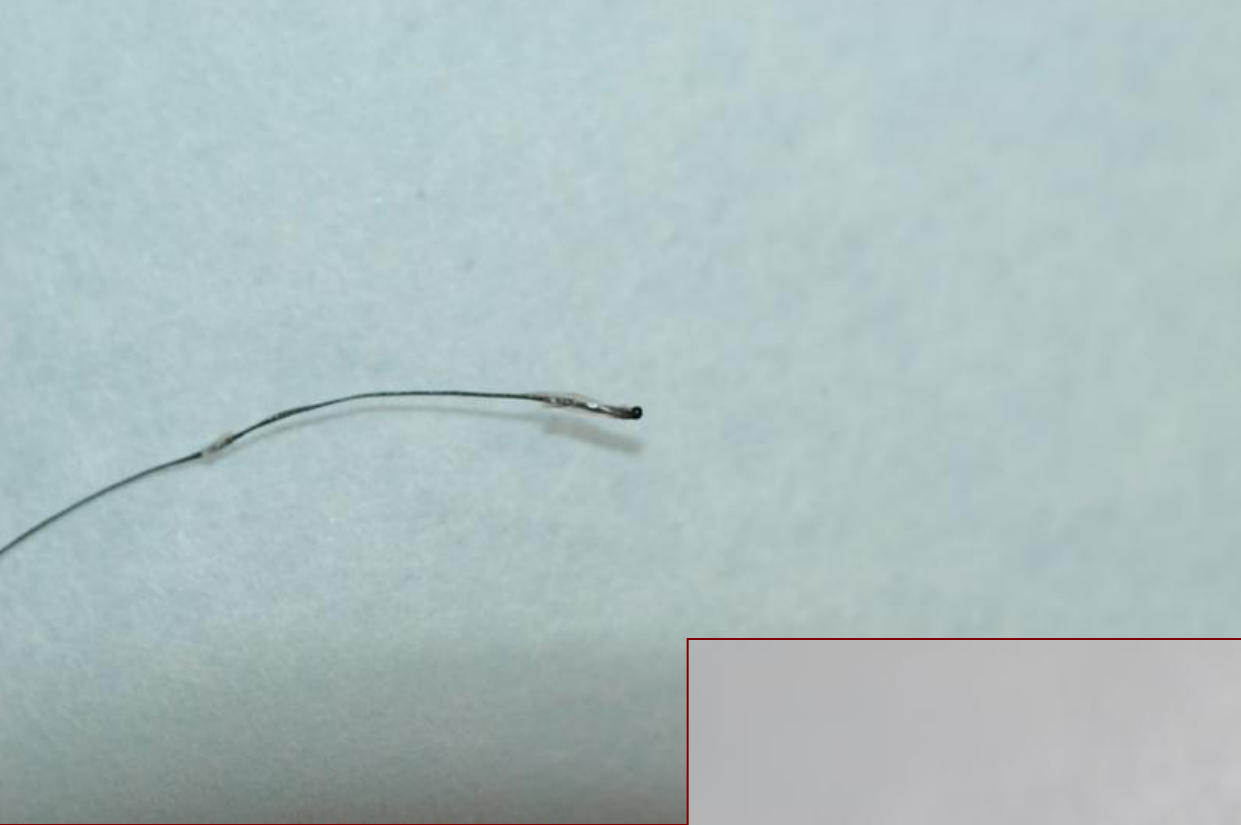
✓ **Growth rate?**

0.3mm/day for scalp hair





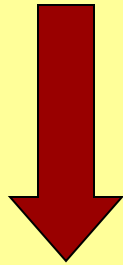




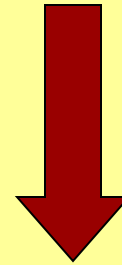


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Alopecia



**Non-Scarring
(Reversible)**



**Scarring
(Irreversible)**



scarring



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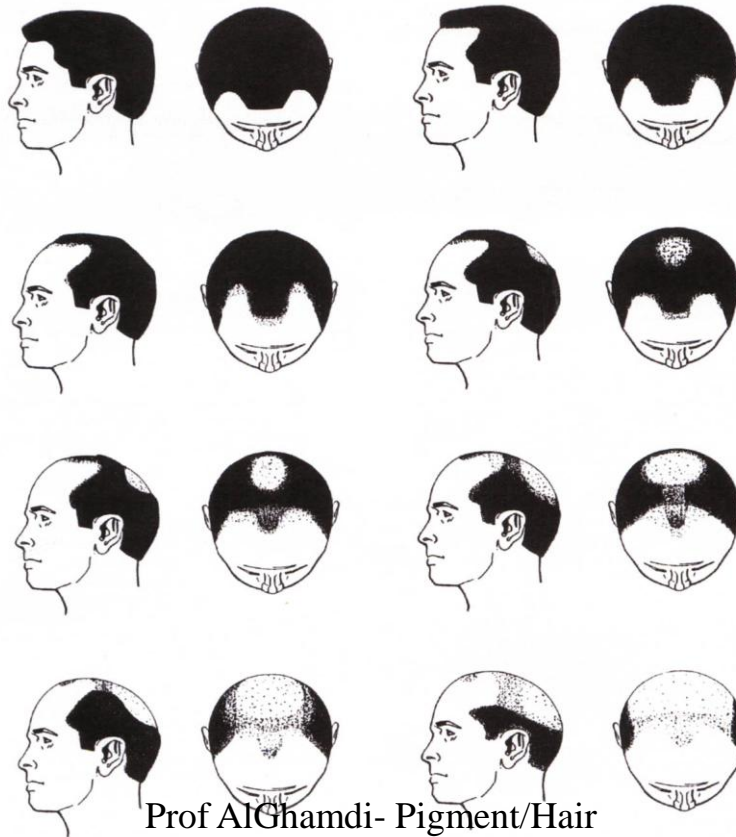
Androgenetic Alopecia

(Male and Female Pattern Hair Loss)

Male Pattern Hair Loss

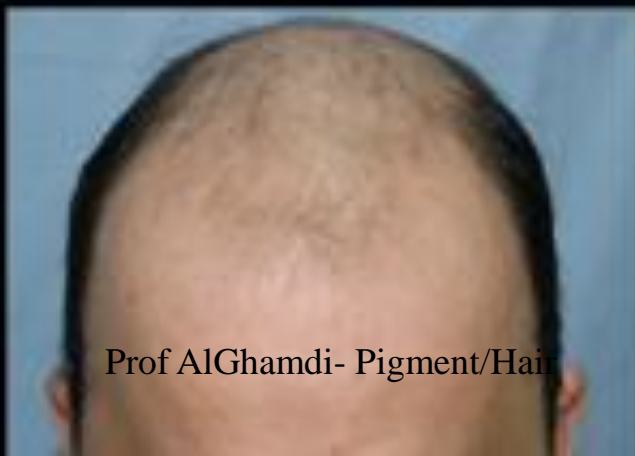
درجات تساقط الشعر

Stages of Hair Loss



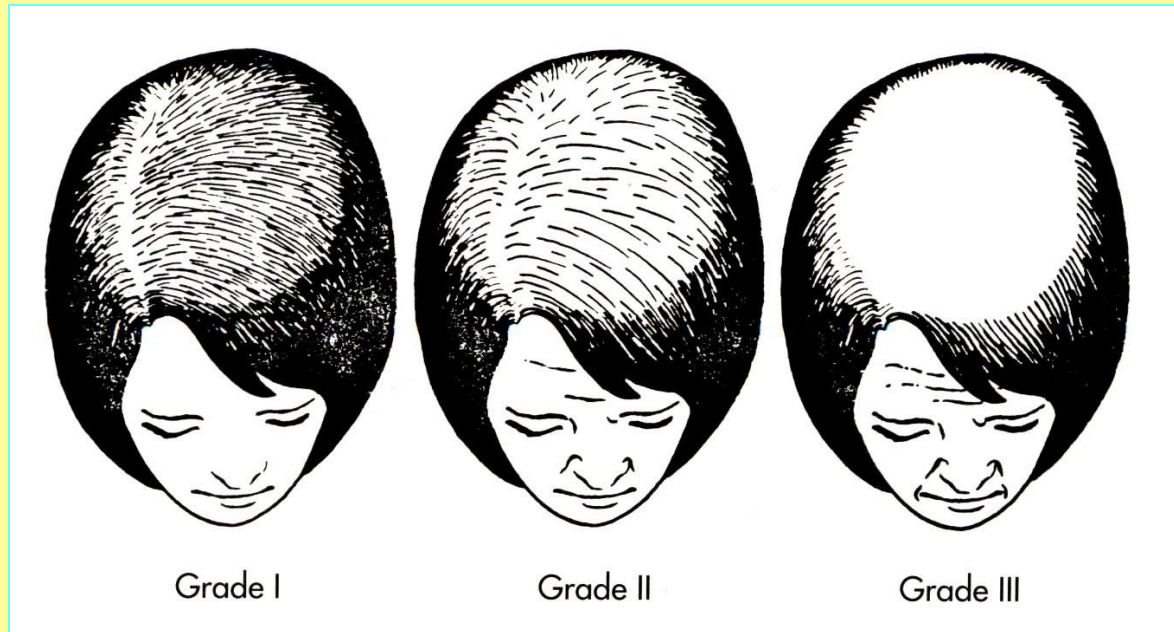
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Male Pattern Alopecia



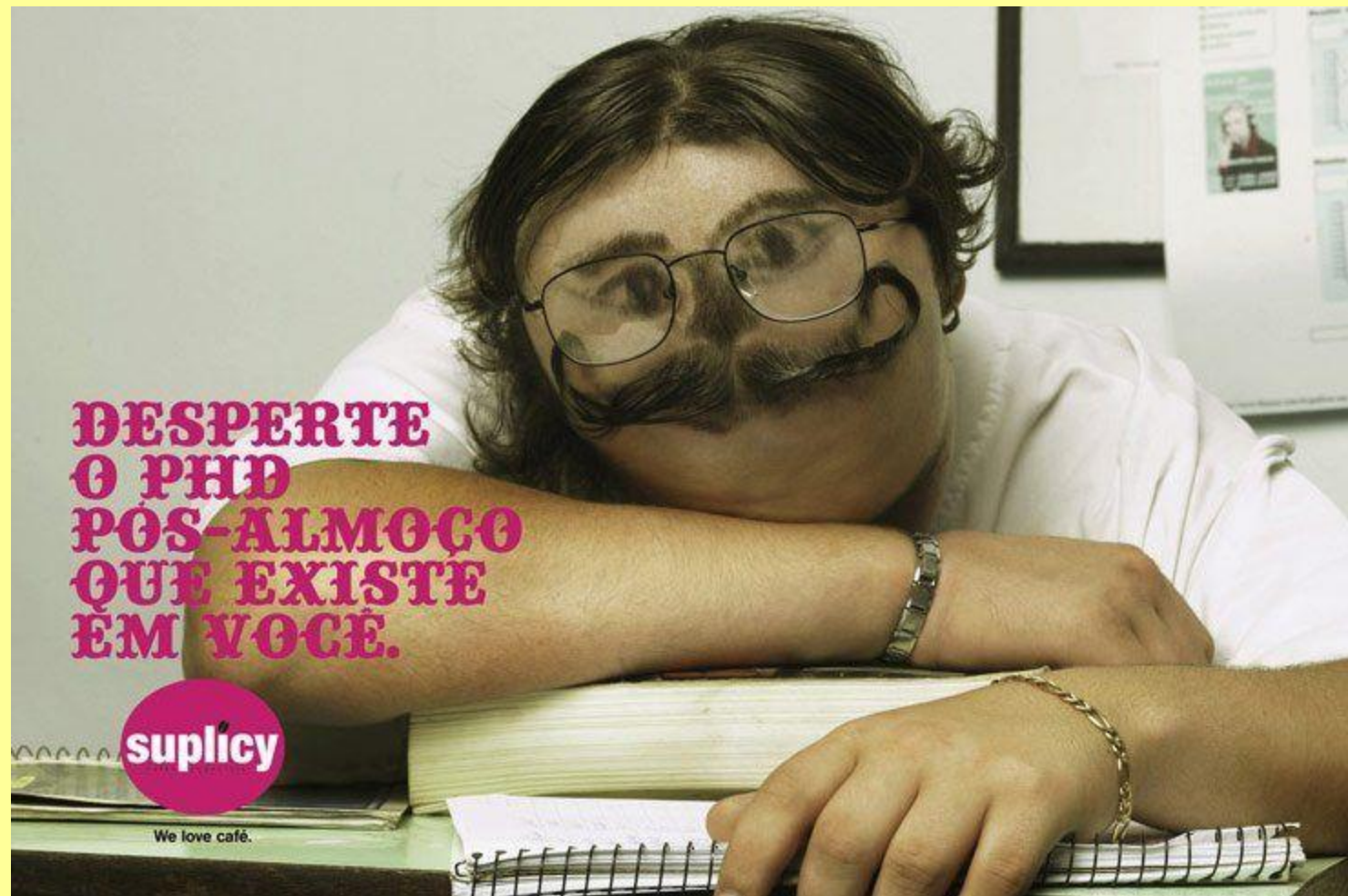
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Female Pattern Hair Loss



Female Pattern Alopecia

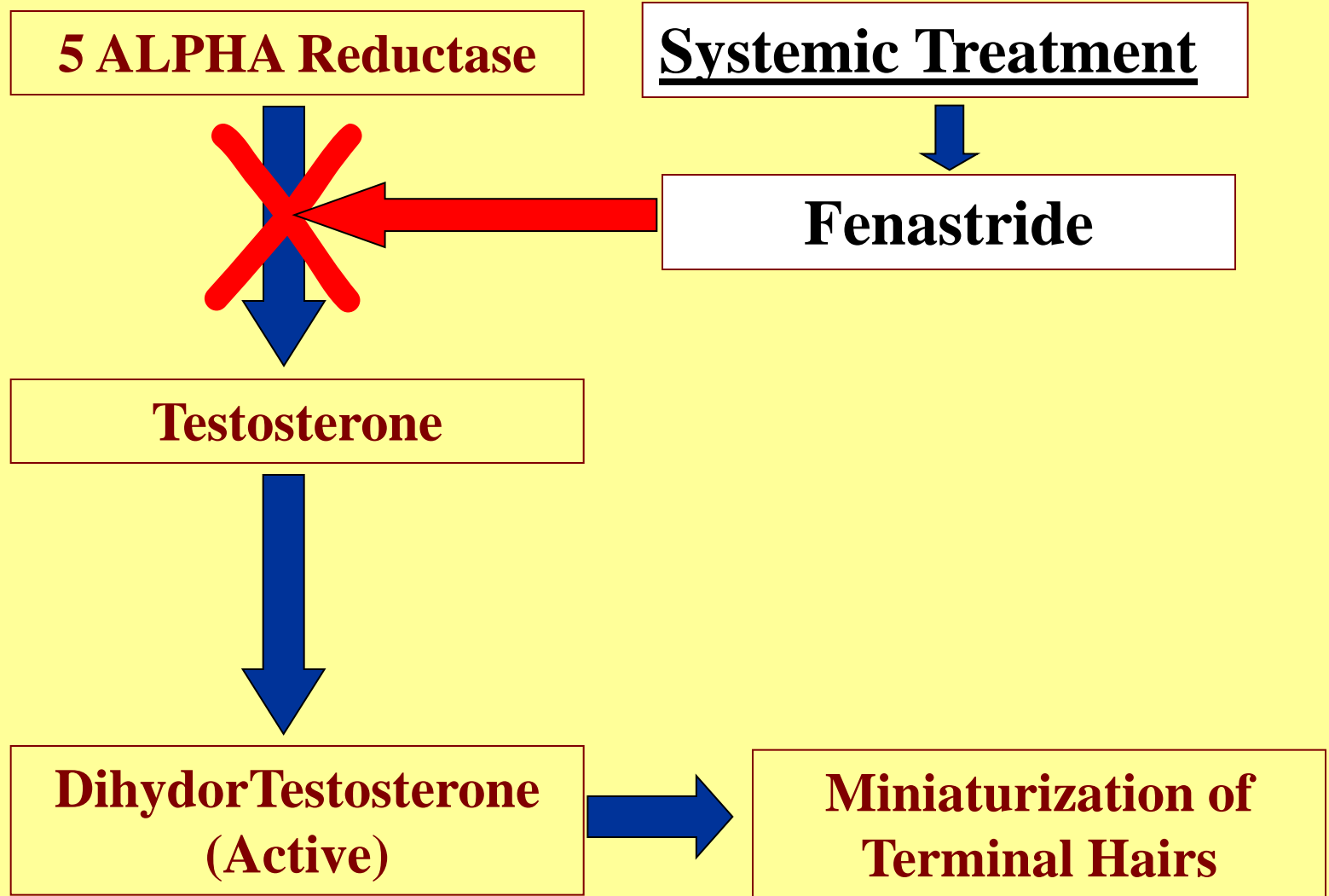




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Androgenetic Alopecia

- ✓ **Androgenetic Alopecia affects up to 50% of males and 40% of females**
- ✓ **Autosomal dominant with variable penetrance**
- ✓ **85% : +ve family history**
- ✓ **Role of androgens in the pathogenesis:**



Topical Treatment

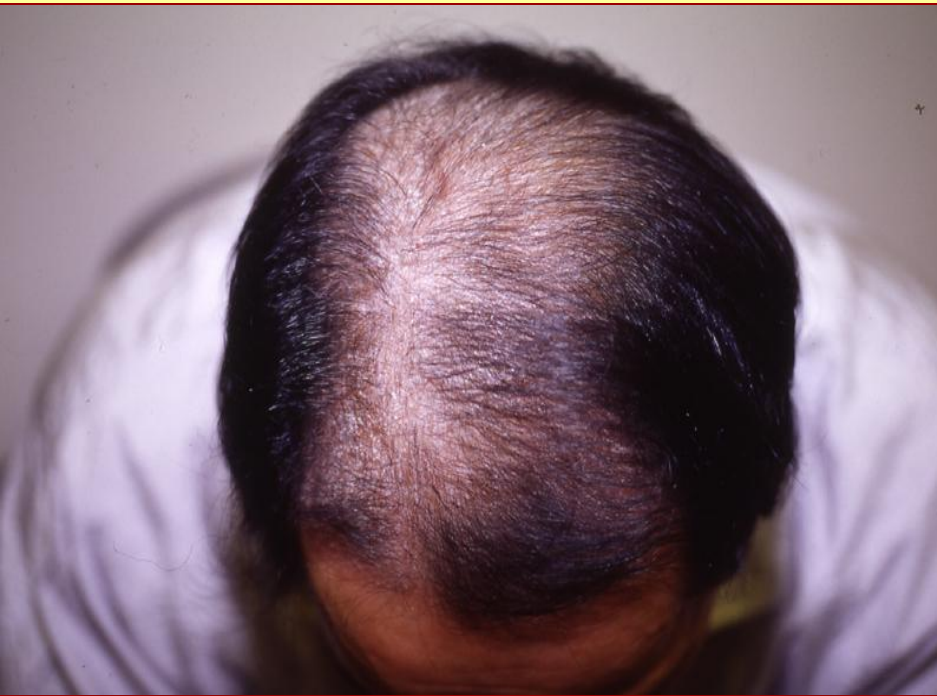
Minoxidil 2% and 5% Solution

Systemic

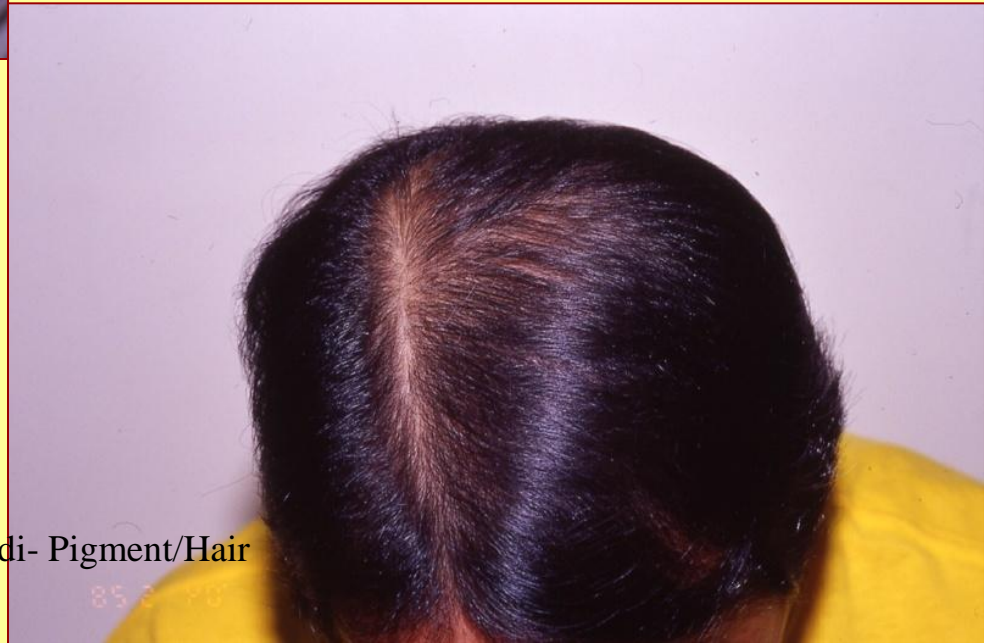
Finastride 1 mg daily

Surgical

Hair transplantation



Fenastride





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Minoxidil 5%



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Minoxidil 2% and 5%





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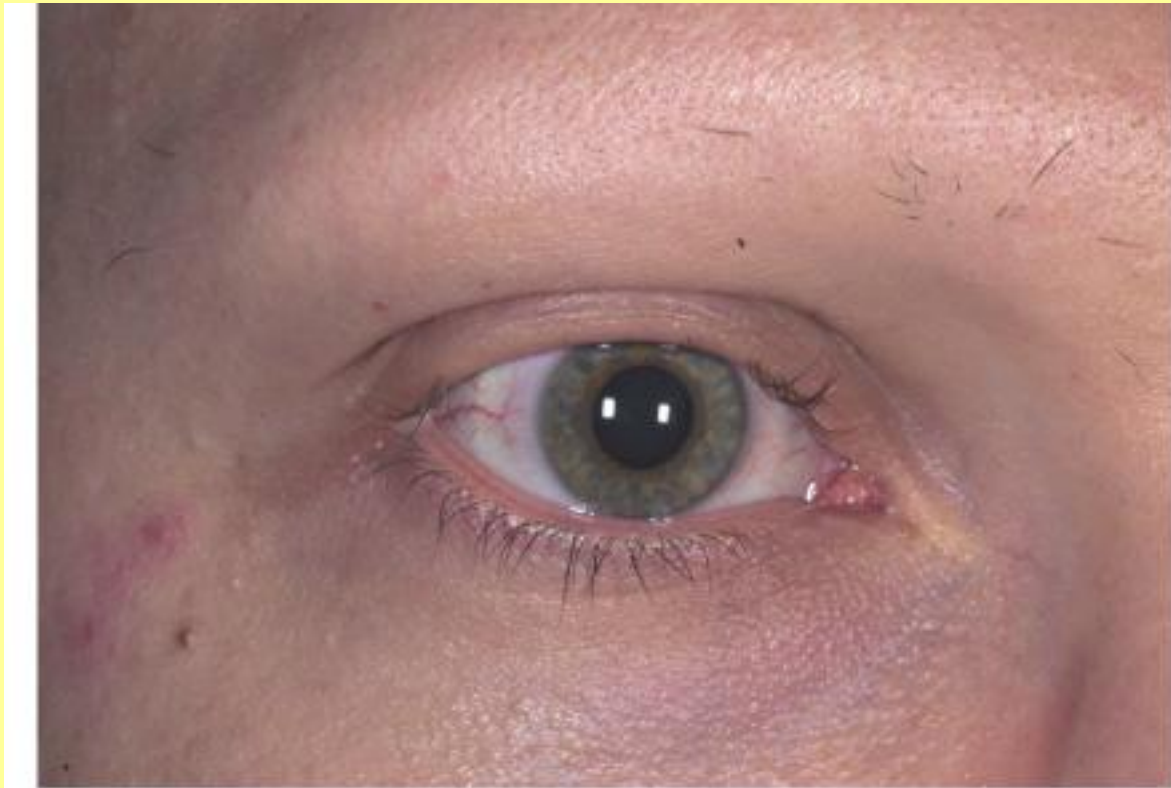


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Alopecia Areata



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Alopecia Areata

- ✓ **30%: +ve Family history**
- ✓ **High rate of self recovery**
- ✓ **Role of immune system in the pathogenesis**

-Clinical presentation;

Uninflammed skin

-Sites:

-Nails:

-Prognosis: limited vs extensive



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Treatment

No treatment

Topical steroid

5% Topical minoxidil

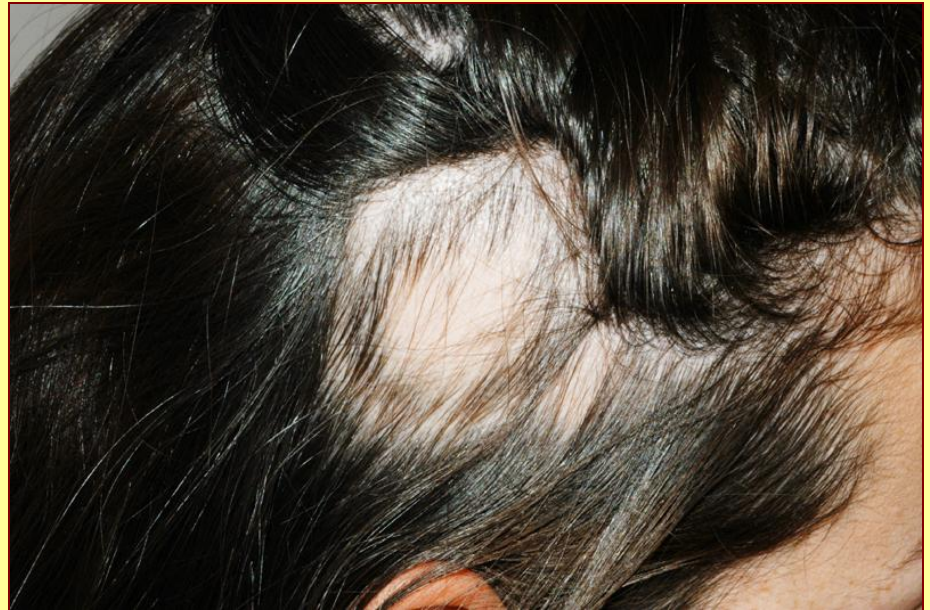
Intralesional Corticosteroids

Skin Sensitizers(Anthralin)

Oral steroids

Iv steroid pulse therapy

Hair transplant ?????



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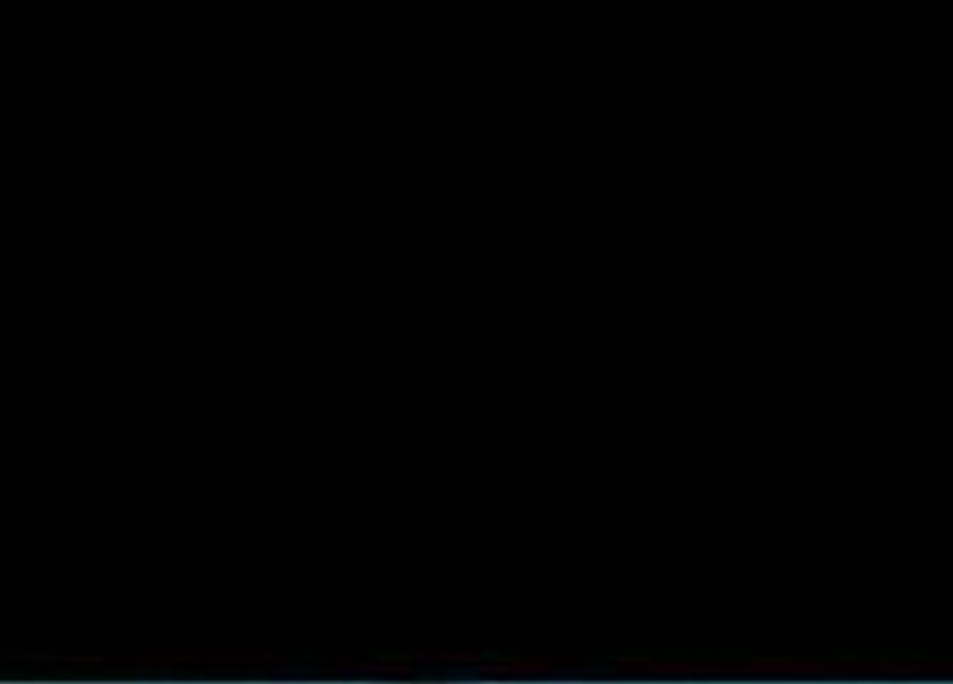


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Skin Sensitizers

Immune modulating Rx







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Anagen effluvium

- ✓ Cause: cytotoxic chemotherapy
- ✓ Sudden and severe alopecia
- ✓ Mostly reversible but not always

Telogen effluvium

- ✓ **Common and Non-specific**
- ✓ **Acute or chronic**
- ✓ **causes:**
 - **Anemia**
 - **Postpartum**
 - **postfebrile**
 - **drugs**
 - **Weight loss (crash dieting)**
 - **Acute blood loss**
 - **postsurgical**
 - **Low iron**
 - **Others**
- ✓ **Reversible (but may become chronic)**

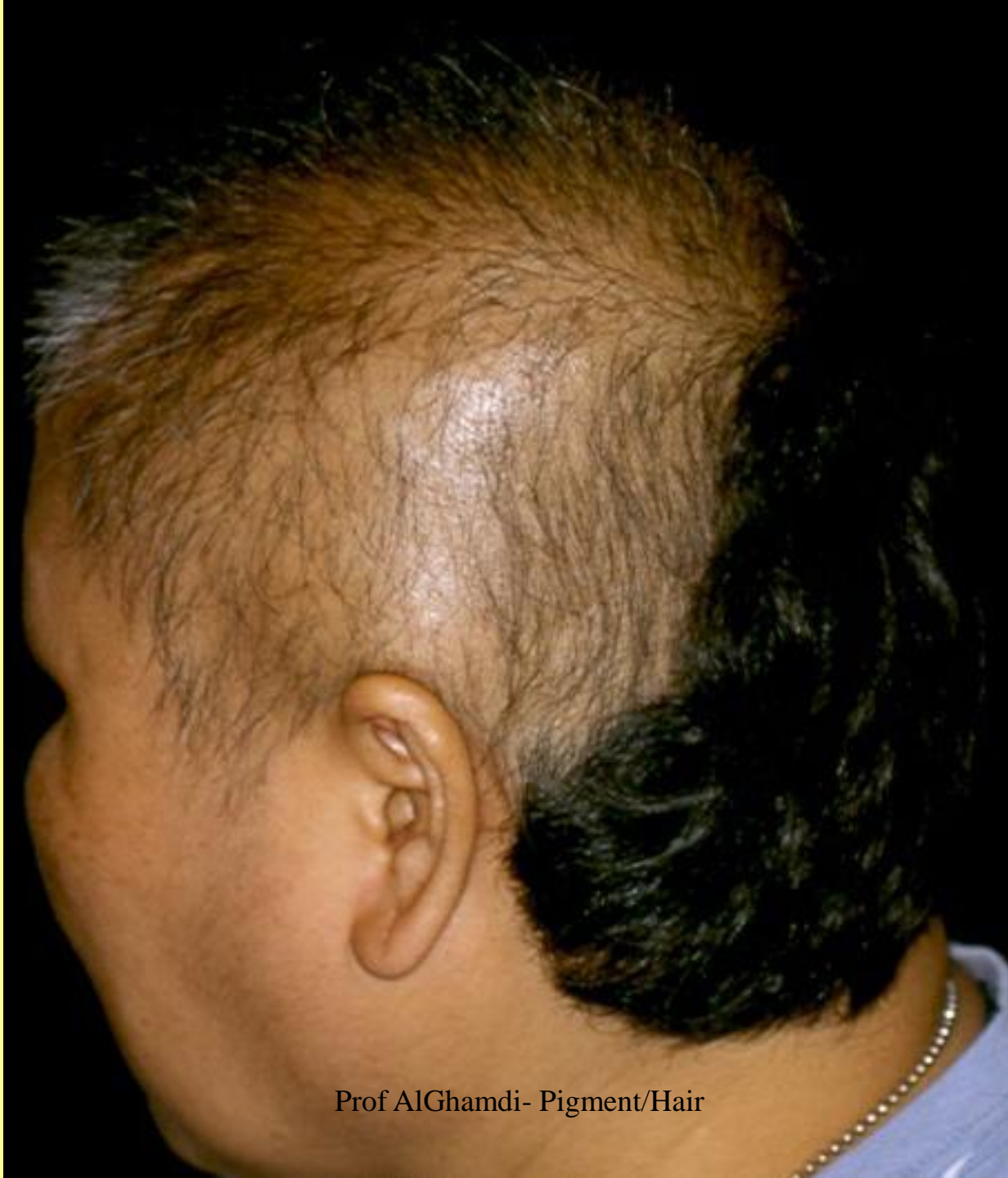


Trichotillomania

- Obsessive compulsive disorder
- Pulling of hair
- Asymmetrical areas
- Treatment:

Behavioural therapy

SSRI



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Fungal Scalp Infections(tinea capitis)

Child had contact with animals.

- Scaly or inflammed alopecia or Kerion

- siblings may also be affected.

- Wood's Light

- Scalp scrapings and hairs should be examined microscopically, and cultured to demonstrate the fungus.

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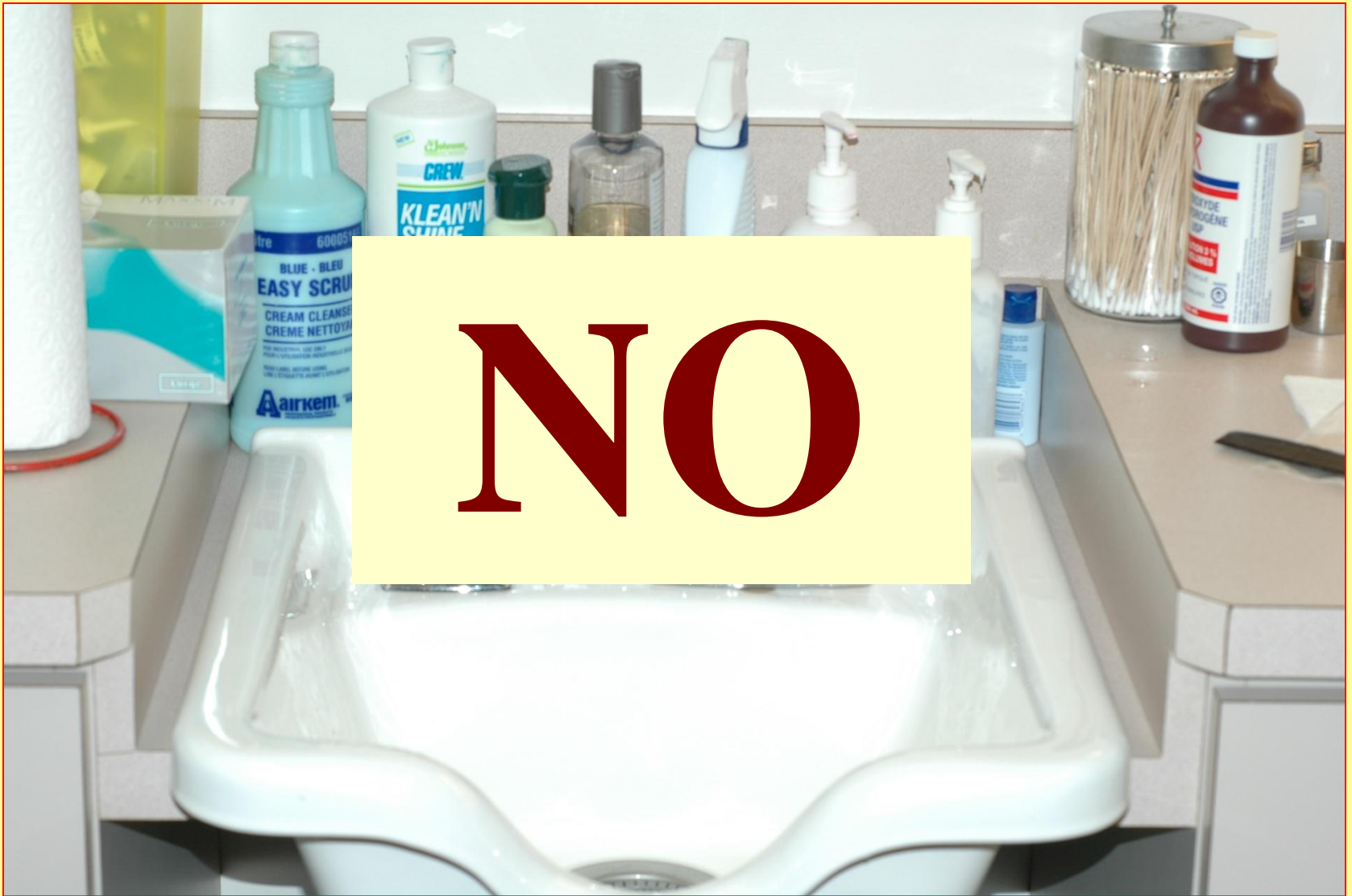




Fungal scalp infections

Treatment:

- Oral antifungal(griseofulvin or terbinafine or itraconazole)
- Hair regrow normally unless a kerion has led to scarring.



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Chronic Discoid lupus

- patchy and scaly alopecia ,
 - follicles plugged by scales and erythematous advancing margin.
 - scarring process => permanent alopecia
- Treatment of early lesions



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Hirsutism

- Hirsutism is excess growth of androgen-dependent hair in a male pattern
- Hypertrichosis is excess growth of hair in non androgenic pattern.

Seen in both sexes but hirsutism is restricted to females.



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Hirsutism

In female pt hair grows in the beard area, around the nipples, and in a male pattern on the abdomen.

-Hirsutism can cause great distress to a healthy woman and lead to psychological disturbances with depression.

Causes

Adrenal: Cushing's syndrome, virilizing tumours, congenital adrenal hyperplasia

Pituitary: acromegaly

Ovarian: Polycystic ovaries, virilizing tumours, gonadal dysgenesis

Iatrogenic: due to androgenic drugs

Idiopathic: Target or end-organ hypersensitivity(the commonest cause) t

Investigation

To exclude the underlying, treatable causes

-Although many tests of adrenal, ovarian, and pituitary function are available, the young woman who is menstruating regularly, and has had one or more successful pregnancies, requires little endocrine assessment.

Full endocrine assessment is, however essential in patients with amenorrhoeas, scanty, irregular periods, or with signs of excess androgen stimulation.

Signs of virilization?

treatment

Laser

Diane



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Hypertrichosis

- Either congenital or acquired
- Congenital associated with melanocytic naevi, while lumbosacral hypertrichosis (faun tail) should alert the pediatrician or obstetrician to the possibility of spina bifida occulta.
- Acquired drug induced

Endocrine disorder like thyroid dysfunction

Anorexia nervosa

Drugs

Hypertrichosis

Drug causing hypertrichosis include :
diazoxide diphenylhydantoin, penicillamine,
and the psoralens.

If the offending drug is withdrawn, the
excessive hair growth will cease.

You see!
I have a nice
hair!!

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Prof AlO

