SCALP CONDITIONS

Alopecia Areata
Telogen effluvium
Hair is simple in structure, but has important functions in social functioning.

Hair follicle is a solid cylinder of cells, grows obliquely down into the dermis.

Hair is made of a tough protein called keratin. A hair follicle anchors each hair into the skin. The hair bulb (Hair matrix) forms the base of the hair follicle. In the hair bulb, living cells divide and grow to build the hair shaft. Hair papilla which contain Blood vessels nourish the cells in the hair bulb, and deliver hormones that modify hair growth and structure at different times of life. The sebaceous gland, Melanocytes, Arrector pili muscle.
**Hair cycle**

1) **Anagen**: the active phase of hair production. can reach 5 years, (85%)

2) **Catagen**: a short phase of conversion from active growth to the resting phase. (10-14 days)

3) **Telogen**: a resting phase at the end of which the club hair is shed. (2-3 months)(15%)
Hairs are classified into three main types.

- **Lanugo hairs**: fine long hairs covering the fetus, but shed about 1 month before birth.
- **Vellus hairs**: fine short unmedullated hairs covering much of the body surface. They replace the lanugo hairs just before birth.
- **Terminal hairs**: long coarse medullated hairs seen, for example, in the scalp or pubic regions. Their growth is often influenced by circulating androgen levels.
Alopecia Areata

- It’s loss of hair
- Local V.S. Diffuse
- Alopecia areata: also known as spot baldness, is a condition in which hair is lost from some or all areas of the body. Often it results in a few bald spots on the scalp, each about the size of a coin.

- lifetime risk of getting alopecia areata is 2%
- Pathophysiology: immunological basis is suspected because of an association with autoimmune diseases such as Hashimoto’s thyroiditis, atopy, vitiligo, IBD, autoimmune poly endocrinopathy syndrome.
- Histologically: T lymphocytes cluster around affected hair bulbs
- Causes:
  - Inherited as a complex genetic trait, sometimes HLA-DQ3, -DR11 or -DR4, with an increased occurrence in 1st degree relatives. Also 10% of patients with Down’s syndrome (involvement of genes on chromosome21)
  - Environmental factors
A typical patch is uninflamed, with no scaling, but with empty hair follicles. Pathognomonic ‘exclamation-mark’ hairs !!!.

- !!!: They are broken off about 4 mm from the scalp, with the proximal end more narrowed and less pigmented.

Patches are most common in the scalp and beard. Up to 50% of patients show fine pitting or wrinkling of the nails.

Course: The outcome is unpredictable. In a first attack, regrowth is usual within a few months. New hairs appear in the center of patches as fine pale down, and gradually regain their normal thickness and color, although the new hair may remain white in older patients. 50% of cases resolve spontaneously without treatment in 1 year, and only 10% go on to develop severe chronic disease. Subsequent episodes tend to be more extensive and regrowth is slower.
Alopecia areata
DDx:
- Ring-Worm. (scaly)
- Lupus erythematosus & lichen planus (inflamed)
- Hair pulling habits of children (broken hairs) (true exclamation-mark hairs are absent)
- Secondary syphilis (‘moth-eaten’ patchy hair loss)

Investigations
- None are usually needed.
- The histology of bald skin shows lymphocytes around and in the hair matrix.
- Syphilis can be excluded with serological tests if necessary.

Treatment:
- A patient with a first or minor attack can be reassured about the prospects for regrowth.
- Topical corticosteroids creams (systemic steroids should be avoided in most cases)
- Intradermal injection of 0.2 mL intralesional triamcinolone acetonide
- Ultraviolet radiation or PUVA
- Topical immunotherapy with contact sensitizers (efficacy has yet to proved)
Telogen effluvium

Telogen effluvium: a scalp disorder characterized by the thinning and shedding of hair resulting from early entry of hair in the telogen phase.

- **Cause**
  Telogen effluvium can be triggered by any severe illness, particularly those with bouts of fever or haemorrhage, by childbirth and by severe dieting. Large numbers of hairs are lost at the same time in the telogen phase.

- **Presentation and course**
  The diffuse hair fall, 2–3 months after the provoking illness, can be mild or severe. Beau’s lines may be seen on the nails. Regrowth, not always complete, usually occurs within a few months.
Beau’s lines
DDx.:

- **androgenetic alopecia** (females the onset is gradual in mid adulthood, and hairs remain rather firmly anchored to the scalp)
- **diffuse alopecia areata** (hair loss is more patchy, & the onset abrupt with waxing & waning. Shedding may be prominent. Exclamation mark hairs are often present.)

**Treatment:**

- This condition is unaffected by therapy, but patients can be reassured that their hair loss will be temporary.
Thank You