Introduction:

- Hair loss (alopecia) is a common problem and often a major source of distress for patients.
- The differential diagnosis includes both scarring and non-scarring alopecias.
- Many hair shaft disorders can produce hair shaft fragility resulting in different patterns of alopecia.
- Therefore, a well-organized and systematic approach is needed to accurately address patients’ complaints to achieve the correct diagnosis

Lecture outlines:

A successful systematic approach for diagnosing different types of alopecia should follow the classical clinical steps:

- History from hair patients
- Clinical examination of hair and scalp
- Use of trichoscopy
- Skin biopsy

History in Hair patients:

- **Age:**
  Certain diseases are more common in children compared to adults.
  Children: Alopecia areata (AA), Tinea capitis, hair shaft disorders
  Pre-pubertal: Trichotillomania, Traction alopecia

- **Sex**

- **Main complaint:**
  Hair thinning
  Reduction in the global scalp hair coverage to the level that a patient cannot hide the scalp.
  Hair shedding
  Hair may fall out in clumps especially during shampooing or combing
  Key questions implicating a significant hair shedding are:
    - Hairs on the pillow
    - Hair in the food, kitchen counter and stove
  Changes in the hair texture, such as being more frizzy or curly
  **Symptoms:**
    - Soreness
    - Itching
    - Burning sensation

- **Duration of the hair loss:**
  Diagnostic and prognostic value
• **Hair regrowth:**
  Regrowth of hair typically occurs in non-scarring alopecias
  It may rarely occur in very early treated scarring alopecia (DLE)

• **Present and past medical history**
  **General Health**
  A variety of autoimmune, metabolic and endocrine disorders can cause different types of hair loss.
  **Past medical and surgical history** especially for the 6 months period prior to the onset of hair loss can be related to the cause.

• **Drug history**
  Drug-induced alopecia (Telogen effluvium (TE)) is usually diffuse and non-scarring
  Results from “immediate anagen release”: Follicles that would normally complete a complete longer anagen cycle enter telogen prematurely
  The scalp hair is the usual affected site
  Increased shedding of the scalp hair occurs 2-3 months after starting the offending drug

• **Nutritional History:**
  Low protein and caloric intake can cause TE.
  Hair fibres are composed mainly of keratin protein (98%)
  Various eating disorders can cause hair loss. (Bulimia, anorexia nervosa)
  Assess the patients’ intake of iron

• **Psychosocial history**

• **Cosmetics and hair care practices:**
  Hair shafts can be adversely affected by various physical and chemical hair care practices

• **Family History:**
  The same hair condition can be seen in pattern hair loss (PHL), AA and congenital hair shaft disorders
  Autoimmune diseases can be seen in patients with AA

• **Special considerations in women:**
  **Androgen excess**
  History:
  Menstrual cycle / Menopause
  Previous pregnancies/ Infertility
  Oral contraceptives/ hormonal replacement therapies
  Hirsutism
Clinical Examination

- **Positioning:**
  Position the patient on a chair
  Remove any hair pieces, extensions or hair pins
  Full access to all portions of the scalp is a must

- **Overall scalp examination**
  A full access to all parts of the scalp
  360 degree
  Panoramic view of the scalp
  Recognizing the pattern and distribution of hair loss:
  - Diffuse
  - Localized
  Decide about:
  - Hair density in different parts of the scalp
  - Patchy hair loss
  - Assessment of frontal hairline

- **Close-up examination**
  Naked eyes or a magnifying lens/dermoscopy
  Differentiate between scarring and non-scarring alopecia
  - Redness, pustules, crusts/scales, dyspigmentation, atrophy, telangiectasia

- **Special maneuvers**
  Hair pull test
  A positive hair pull test indicates active hair shedding and can be seen:
  - TE
  - Active stages of AA
  - Scarring alopecia
  - The hair card
  - Newly growing hair can be easily differentiated from broken hair
  - Response to therapy
  - Hair calibre

- **Scalp biopsy:**
  Skin biopsy is the gold standard tool for diagnosing scarring alopecia and it is very helpful for evaluating non-scarring alopecia
• **TRICHOSCOPY**

Evaluate the following structures:

(1) Hair shafts
   Hair shaft structure abnormalities may provide diagnostic clues for multiple causes of hair loss beyond genetic hair shaft defects.

(2) Hair follicle openings
   The term “dots” refers to the small, round hair follicle openings
   4 types:
   - Black dots
   - Yellow dots
   - Red dots
   - White dots

(3) Perifollicular epidermis
   Scaling, color, discharge

(4) Dots

(5) Blood vessels
   18 types of vessels
   Cicatricial and non-cicatricial alopecia
   Inflammatory scalp conditions