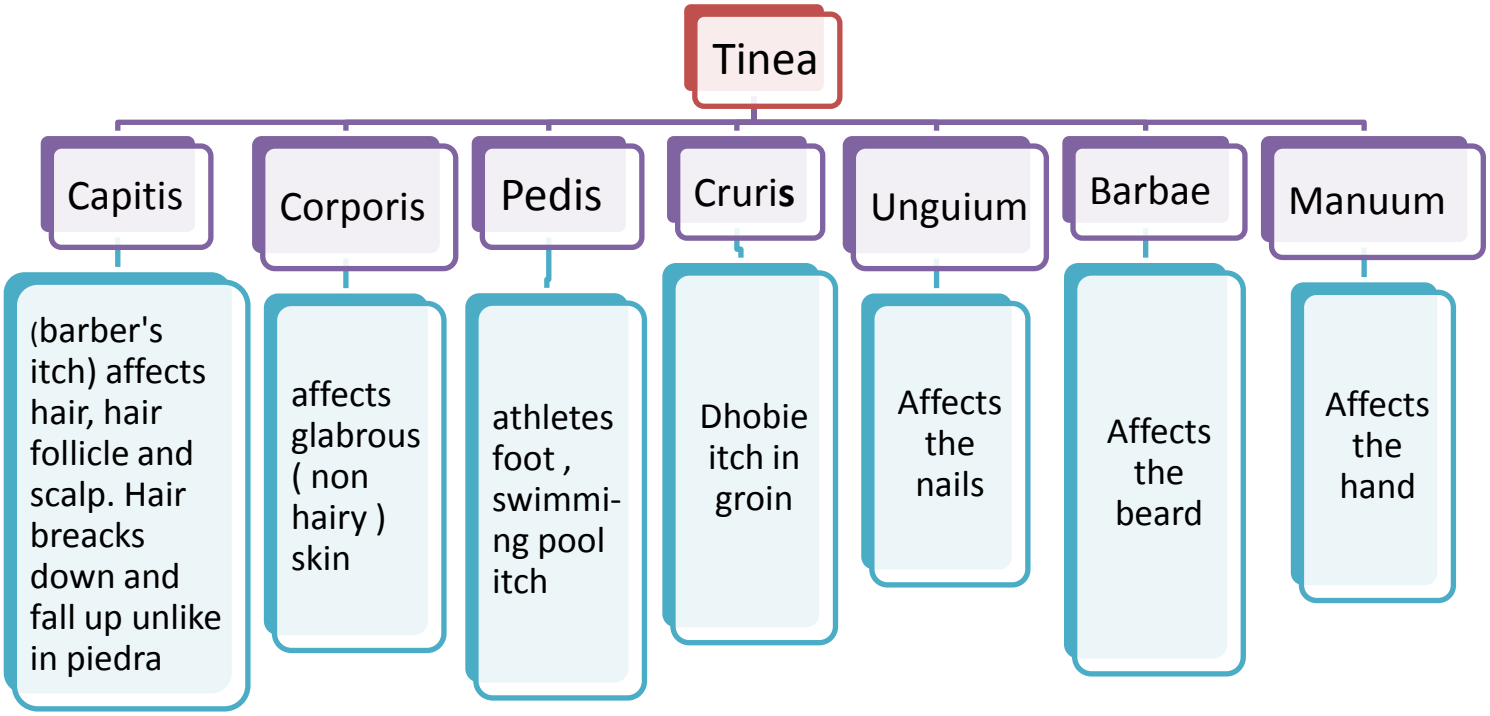
Lecture 2

Dermatophytosis

- They are fungal infection of the keratinized tissues of the body (stratum corneum, hair, nail).
- it is a contagious .
- Skin lesion – shape : annular, ring, called Tinea or Ringworm.
- Necrotic in center.
- Active Fungus in the margin
- Causes itching.
- Presents anywhere in the body
- Affects smooth non hairy skin, hairy skin and hair folicles.
- Infected hairs fall off.



Kerion and Favus are more advanced lesions of dermatophytosis. Both of them affect the scalp causing more severe itching.

Kerion:

- Lesions in scalp cause severe itching.
- The kerion is not a swelling but the lesion has a dome appearance due to production of pus from the hair follicles; so the infection is pustular.

Favus:

- Lesions in scalp cause severe itching and pain
- The lesion is dry (no pus)
- Unpleasant smell
- Yellowish in color

Epidemiology:

- Contagious disease found anywhere in the world.
- Affect children, adults, males and females.
- Children are affected more than adults.
- Familial cross infection occurs.
- Acquired from infected persons, pets and livestock.

Etiology:

- Dermatophytes are imperfect moniliaceous mold fungi, primary pathogens.
- Produce spores asexually.
- Produce (light-colored) colonies on culture (white colony).
- Produce alkaline substance.
- Sensitive to 20 ug/ml griseofulvin but resistant to 500 ug/ml cycloheximide.
- Have special hyphal structures like : Raquet hyphae , nodular bodies , pectinate hyphae , hyphal coils (spirals)

The dermatophytes are in 3 genera

1- Trichophyton:	2- microsporum :	3- epidermophyton:
- Cause hair, skin and nail infection	- Cause skin and hair infection (no nail infection)	- Cause skin and nail infection (no hair infection)
* Zoophilic:	Zoophilic : M.canis → in cats	- They reproduce asexually forming conidia by which can be identified
T.mentagrophytes → in rodents, dogs,livestock	Anthrophilic: M.audouinii → in soil	- Shape: round tip , club shape , smooth wall
T.verrucosum → in cows	- Most common cause of T.capitis in KSA	
* Anthrophilic: T.violaceum, T.rubrum	- Shape: spindle, rough , pointed	
- Shape : Elongated, smooth wall, round tip		

Laboratory Diagnosis:

Specimens;

Skin scrapings from the lesion

KOH test : the specimen is placed in 10 % or 20 % of KOH , which has 2 advantages :

1- Destroy the epithelial cells

2- Doesn't affect the fungi

- +ve results will show septate hyphae of spores or both

Treatment:

1- Griseofulvin: topical or systemic

2- Azoles: topical or systemic

3- Allylamines: topical

4- Tolnaftate: 1% solution .