

The diagnosis of skin diseases

Dermatology is a morphologically oriented specialty. As in all specialties the medical history is important, however, the ability to interpret the findings is even more important. The diagnosis of skin disease must be approached in an orderly and logical manner, and the temptation to make rapid judgments after hasty aberration must be controlled. The recommended approach to the patient with skin disease is as follows:

Obtain a brief history from the patient especially, noting; duration rate of onset, location, symptoms, previous episodes, family history, history of exposure to allergens, occupation, and previous treatment.

Determine the extent of the eruption by uncovering the patient completely.

Determine the primary lesions with the help of a hand lence.

Determine the nature of any secondary or special lesions.

Formulate a differential diagnosis.

- Obtain a skin biopsy and the following laboratory tests;
- 10-20% potassium hydroxide (helps in the diagnosis of fungal infection of the skin)
- Skin scrapings for scabies.
- Gram stain
- Fungal and bacterial cultures
- Cytology (Tzanck smear)
- Woods light examination
- Patch tests
- Dark field examination and blood tests studies.

How is a KOH examination performed?

The highest rate of recovery of organisms occurs in specimens taken from the tops of vesicles and the edges of annular lesions. The site should be swabbed with an alcohol pad or water and scraped with a #15 blade. The moist corneocytes are then easily transferred from the blade to a glass slide. One or two drops of KOH (10-20%) are added, and the specimen is cover-slipped. The KOH preparation is gently warmed, but not boiled, and then examined under the microscope. It is important to focus back and forth the material, so that the refractile hyphae can be found. Fungal hyphae can be recognized by their regular cylindrical shapes with branching and presence of septa. Older lesions may demonstrate numerous rounded spores called arthrospores.

What laboratory tests are useful for diagnosing *tinea capitis*?

Fluorescing the affected area with a **Wood's light** is the quickest technique. If the hair fluoresces a yellow-green, then a fungal infection is likely. However, the lack of fluorescence does not exclude tinea capitis, because *Trichophyton tonsurans* accounts for 75-90% of scalp ringworm infections, and it does not fluoresce by wood's light.

Examination of **KOH-treated** infected hair is more sensitive and rapidly performed. The best results are obtained when broken-off hairs are examined since these are the ones infected by hyphae and arthrospores. Infection can be immediately apparent on KOH examination if the fungus grows outside the hair shaft (ectothrix). Some dermatophytes, such as *T. tonsurans*, grow within the hair shaft (endothrix), and a few minutes are required to let the KOH break down the hair shaft so that the arthrospores can be more easily visualized.

The diagnosis can also be proved by **fungal cultures** (the commonly used culture media are dermatophyte test media and Sabouraud's dextrose agar with or without antibiotics and cyclohexamide that added to suppress bacterial contaminants and yeasts). The easily broken, infected hairs are embedded in the culture media which needed more than two weeks to grow.

What is a wood's light or lamp? How is it useful in skin diseases?

A wood's light produces invisible long-wave ultraviolet radiation, or black light at 360 nm. When this light strikes the surface of the skin or urine, fluorescence is produced in some disorders. This fluorescence is best observed in a completely dark room.

Wood's lamp is useful in diagnosing some cases of tinea capitis (*Microsporum* spp, fluoresce and *Trichophyton* spp.do not), tinea versicolor (dull yellow fluorescence), erythrasma (coral red fluorescence), and *pseudomonas* infections of the skin (green fluorescence), it is also useful as a screening test in porphyria cutanea tarda, in which the urine fluoresces a coral red.

Wood's light may also be used in certain disorders of pigmentation .In patients with hyperpigmentation, it is used to localize the site of the pigment, since it accentuates epidermal pigment, while dermal pigment is unchanged. It is also used in patients with hypopigmentation since it can differentiate between depigmentation and hypopigmentation

What is Tzanck preparation or smear ?

A Tzanck smear is a standard technique for the rapid diagnosis of herpes simplex virus (HSV) or varicella-zoster virus (VZV) infection. . It cannot distinguish between these two agents, nor can it distinguish between HSV subtypes (HSV type 1 or 2). It is performed by scraping the base of a fresh blister with a scalpel blade and then spreading the adhering cells and material on a glass slide. The slide is then stained with Giemsa, Wright's, or Sedi stain. The typical multinucleated giant cells or atypical keratinocytes with large nuclei are then sought under the microscope (see figure).

What is the best method of diagnosing scabies?

The best method is to scrape a burrow and demonstrate the parasite inside it. A classic burrow appears as an irregular, linear, slightly elevated lesion, best found on the flexor wrists, finger webs, and genitalia. Eight-five percent of adult male patients with scabies will have mites on the hands or wrists. Occasionally, the mite can be seen with the naked eye as small dot at one end of the burrow. A sample is collected with number 15-scalpel blade. Following the application of mineral oil on either the blade or skin, the burrow is scraped vigorously, but not so vigorously as to draw blood. The mineral oil is collected from the skin and transferred to a glass slide, which is then examined under the microscope. The diagnosis is established by identifying the fecal pellets (scybala), or mite.

What is the diagnostic test of choice for a patient presenting with a suspected syphilitic chancre on his penis?

Darkfield examination of the chancre is the most specific test for the diagnosis of syphilis. This test is typically positive unless the patient has applied or ingested antibiotics. In addition to primary syphilis, darkfield microscopy can also be used to diagnose all the mucocutaneous lesions of secondary syphilis. It is less reliable for examining specimens from the mouth or rectum because of the high prevalence of commensal, nonpathogenic treponemes in these locations that may be mistaken for *Treponema pallidum*, the agent of syphilis.

The best specimens for darkfield examination are serous fluid expressed from the bases of the chancre following cleaning with sterile saline and clean gauze. The specimen then should be immediately evaluated for the organism's characteristic corkscrew morphology and flexing, hair-pin motility. If a patient is suspected of having a syphilitic chancre and darkfield examination offers immediate results and is a cheap test. However, it is often not available.

Fluorescent antibody microscopy offers a sensitive alternative and has the advantages that it does not require live organisms and it can be done on fixed slides. This technique utilizes antibodies to *T. pallidum*. It requires less expertise due to the high specificity of the antibody reagents, but this test is not widely available.

How is secondary syphilis diagnosed?

As with primary syphilis, the most specific test is darkfield microscopy or by special stains on skin biopsies. More often, screening tests for syphilis such as non-treponemal serologic test for syphilis, usually a rapid plasma reagin (RPR) or a Venereal Disease Research Laboratory (VDRL) test is ordered. Non-treponemal serologic tests for syphilis detect antibodies to reagin, a cholesterol-lecithin-cardiolipin antigen that cross-reacts with antibodies present in the serum of patients with syphilis. These antibodies are not specific for syphilis and should always be confirmed by a specific test for syphilis, usually a fluorescent treponemal antibody-absorption (FTA-ABS) or the microhemagglutination-*T. pallidum* (MHA-TP) test.

Non-treponemal serologic tests for syphilis are positive in almost all cases of secondary syphilis. False-negative sometimes occur in patients with very high antibody titers because of antibody excess; this named "prozone reaction" can be overcome by diluting the patient's serum. Non-treponemal serologic tests are given in titers. Adequate treatment causes the titer to decline to low titers or non-reactivity. If a patient with HIV infection gets syphilis, usually the RPR is significantly elevated. Uncommonly, seronegative primary and secondary syphilis have been reported in association with HIV infection.

In a male patient with symptomatic gonococcal urethritis, how efficacious is a Gram stain of the exudate in comparison to a culture utilizing selective media for gonococcus ?

A Gram stain of a urethral discharge in symptomatic males is an excellent method of diagnosing gonorrhea. A positive Gram stain showing multiple neutrophils, some containing clusters of Gram-negative diplococci with sides flattened toward one another, is cited as having a sensitivity of 98% .With such a Gram stain, a culture is expensive and adds little diagnostic yield (about 2%).Cultures are usually done in males with a urethritis and a negative or nondiagnostic Gram stain of the urethral exudate.

In women with suspected gonorrhea, the site of choice for obtaining specimens is the endocervix. However, gram-stained smears are relatively insensitive (30-60%), and their interpretation is difficult. A culture on selective media is essential to diagnose gonorrhea in women.

What is the best way to diagnose allergic contact dermatitis?

The diagnostic test of choice is properly applied and correctly interpreted **patch test** .Contact dermatitis is divided into irritant or allergic subtypes. Irritant contact dermatitis is not immunologically mediated and is due to chemical damage of the skin. For example, excessive hand-washing or exposure to battery acid will involve almost everyone exposed in such fashion. On the other hand, allergic contact dermatitis is immunologically mediated and is an acquired sensitivity that affects only certain individuals.

How are patch tests applied?

The suspected allergen is usually placed in an appropriate vehicle in an appropriate concentration. The patch test allergens are usually purchased in prepared form, but less common allergens can be prepared individually. The allergens are placed in special wells that are then taped against the skin of the back for 48 hours and then removed. This skin area is then examined 24-72 hours after the patch is removed for a reading. A strong positive reaction has erythema, infiltration, papules, and vesicles. A bullous reaction is extremely positive .Interpretation of patch tests and correlation with the clinical disease is complex and usually performed only by dermatologists.

What are the indications for an excisional biopsy?

Excisional or incisional biopsies are usually elliptical in shape and typically deeper than punch biopsies. An **excisional biopsy** is the complete removal of a lesion down into the fat, followed by layered closure of the skin. It is particularly helpful in the complete removal of malignancies, such as malignant melanoma, basal cell carcinoma, and squamous cell carcinoma. Excisional biopsies can also be performed when the cosmetic result is felt to be superior to that with a punch biopsy.

An **incisional biopsy** is the incomplete or partial removal of a lesion down into the fat, followed by a layered closure of the skin. If suspected melanoma is felt to be too large to remove with simple surgery, an incisional biopsy is used to remove the thickest portion for diagnostic pathologic examination. It is also useful for diagnosing panniculitis, sclerotic or atrophic lesions in which it is important to compare normal adjacent skin to that of the lesion (e.g., scleroderma), and lesions with active expanding borders such as pyoderma gangrenosum.

Define and describe direct immunofluorescence of the skin.

Direct immunofluorescence (**DIF**) of the skin is a histologic stain for antibodies or other tissue proteins in skin biopsy specimens. A tissue sample (skin) obtained from the patient is immediately frozen in liquid nitrogen or placed in special media to preserve the immunoreactant. Arrangements should be made to ensure proper and timely transport to the immunofluorescence laboratory. Once received, the tissue is sectioned and then incubated with antibodies to human immunoglobulins or complement components that have been tagged with a fluorescent molecule to allow their visualization. The samples are then examined with a fluorescence microscope, where fluorescence indicates that immunoreactants were deposited in the patient's tissue. The specific immunoreactants present, and the pattern and intensity of staining, are used to determine the diseases most likely to be associated with the DIF finding.

The primary lesions

Most skin diseases begin with a basic lesion known as a primary lesion. Identification of the primary lesion is the key to accurate interpretation and description of cutaneous disease. Its presence provides the initial orientation and allows the formulation of a differential diagnosis. *So the definitions of the primary lesions and their differential diagnosis as follows:-*

- 1- **Macule:** A change in the color of a skin area without any change in the



consistency of skin. A macule may be erythematous, hypopigmented, depigmented, hyperpigmented or any other color. The differential diagnosis; vitiligo, melasma, and tinea versicolor. The above picture is Becker naevus as an example of macule. (see the flat hyperpigmented area)

2- Papule: A solid indurated raised of skin less than 0.5 cm in diameter. It is produced by proliferation of the tissue cells or infiltration with the inflammatory cells. Papules may become confluent and form **Plaques**. The differential diagnosis:- lichen planus, scabies, insect bites and acne. A papule which is (1-2mm) in size is called a *micropapule*, (5-10mm) in size is called a *nodule* and more than (1cm) is called a *tumor*. The surface of a papule, nodule and tumor may be smooth, rough (verrucous), or (acuminate), elongated like a finger (filiform), hemispherical with a broad base (dome-shape), spherical with a narrow base (pedunculated) or the papule may be (flat-topped). A papule situated at the opening of the hair follicle, is called a follicular papule. See the following figure:

3-Plaque: A circumscribed, elevated, superficial, solid lesion more than 0.5 cm in diameter, often formed by the confluence of papules. Diff. Diagnosis: psoriasis, eczema, tinea corporis.



The small lesions are papules, the large are plaques in psoriasis.

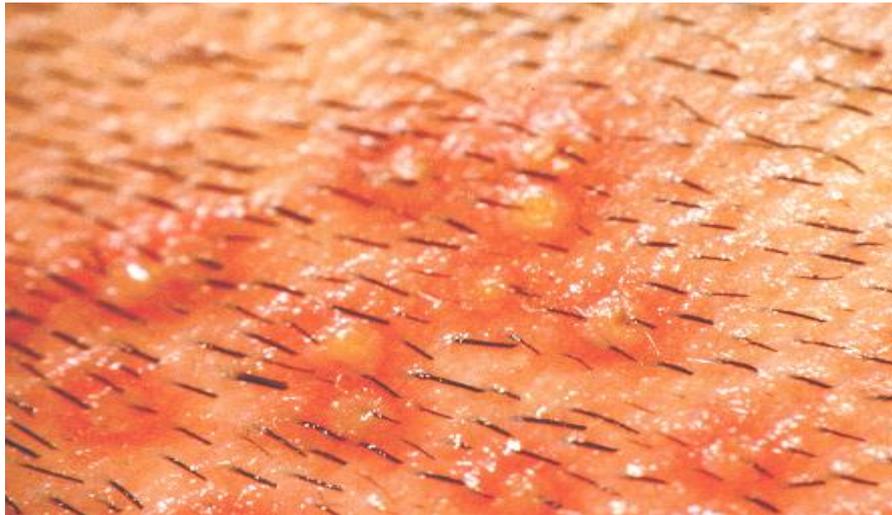
4-Nodule: Circumscribed elevated solid lesion more than 0.5 cm in diameter large nodule is referred to as a tumor. Diff. Diagnosis. lipoma, melanoma, lymphoma.



Blue naevus is an example of nodule.

5-Wheal: Sudden exudation of fluid in the superficial dermis producing a flat raised area of any size and often with an orange-peel appearance on the surface; they are transient and may last only a few hours. It is a primary lesion of urticaria and can be seen in insect bites, dermographism and angioedema. (see the picture in urticaria)

6-Pustule: A circumscribed collection of leukocytes and free fluid that varies in size. e.g.; Acne, Folliculitis.



Pustules in Folliculitis

7-Vesicle: A circumscribed collection of free fluid up to 0.5 cm in diameter. A vesicle larger than 0.5 cm is called bullae or a blister. e.g. pemphigus vulgaris, H. simplex.



Groups of vesicles on erythematous base in herpes simplex

Secondary lesions

Secondary lesions develop during the evolutionary process of skin disease or are created by scratching or infection.

They may be the only type of lesion present in which case the primary disease process must be inferred. Secondary skin lesions are: -

1-Scales: excess dead epidermal cells that are produced by abnormal keratinization and shedding.e.g. Psoriasis, tinea vericolor, pityriasis rosea.

2-Crusts: a collection of dried serum and cellular debris e.g.impetigo, atopic dermatitis (face).

3-Erosions: A focal loss of epidermis; they do not penetrate below the dermo-epidermal junction and therefore heal without scarring.e.g.Candidiasis,intertrigo,vesiculo-bullous disease.



This picture is an example of erosions and crusts.

4-Ulcers: A focal loss of epidermis and dermis, they heal with scarring e.g. Aphthous, chancroid, and primary chancre. (see the following picture)



Ulcer of skin.

5-Fissure: A linear loss of epidermis and dermis with sharply defined, nearly vertical walls e.g. chapping (hands, feet), intertrigo, chronic eczema (fingertip).



Intertrigo, in which picture also shows, erythema and fishers.

6-Atrophy: depression in the skin resulting from thinning of the epidermis or dermis e.g. striae.



Atrophy with scare formation.

7-Scar: Abnormal formation of connective tissue implying dermal damage, when following injury or surgery, they are initially thick and pink but with time become white and atrophic (e.g. burn, acne). Atrophic scar remains below the surface; hypertrophic scar is raised above the surface, while a keloid grows beyond the limits of original lesion.

8-Lichenification: A diffuse thickening of skin with hyperpigmentation and accentuation of skin lines with sever itching. It is seen in: 1- Neurodermatitis
2-Psoriasis 3-Atopic dermatitis 4-Chronic zinc deficiency.



Lichen simplex chronicus (Neurodermatitis), is an example of lichenification.

9-Excoriation:Scratching leading to the removal of the top of a lesion or even the



skin other wise. As seen in the above picture.

Umbilication: Crater-like depression on the top of a papule e.g.molloscum contagiosum, chicken pox.(see the picture)



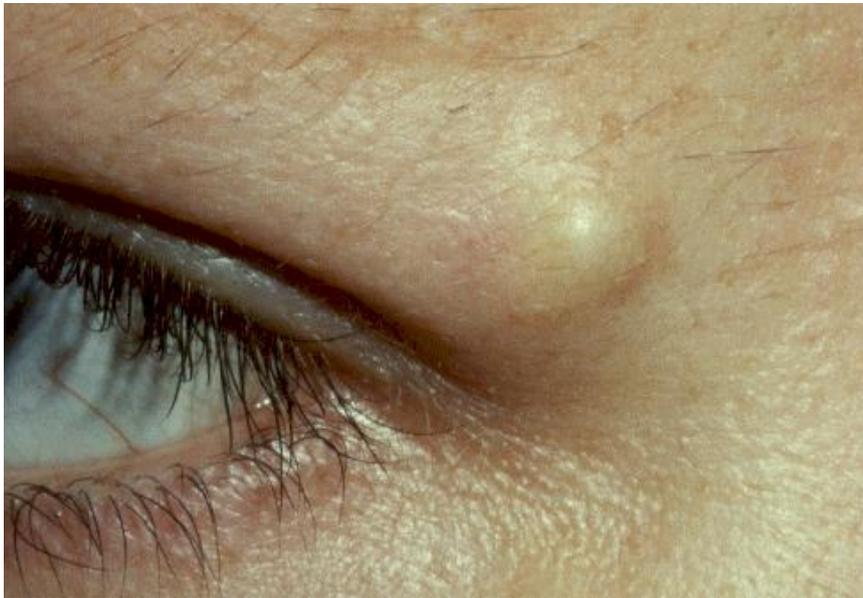
Umbilicated lesion, seen in chicken pox.

Special Skin Lesions

Comedone: A plug of sebaceous and Keratinous material lodged in the opening of hairfollicle; the follicular orifice may be dilated (black head) or narrowed (white head or closed head). It is the primary lesion of acne.

Milia: A small, superficial keratin cyst with no visible opening.

Cyst: Circumscribed lesion having a wall and a lumen; the lumen may contain fluid



Cyst in the eye browse.

Burrow: A narrow, elevated, tortuous channel produced by a parasite. Seen in scabies.

Telangiectasia: Dilated superficial blood vessels seen in:-Lupus erythematosus,



Rosacea, Xeroderma pigmentosum. The above picture shows the telangiectasia of skin.

Petechiae: Circumscribed deposit of blood in the skin less than 0.5 cm in diameter.

Purpura: Circumscribed deposit of blood in the skin more than 0.5 cm in diameter.



e.g. of both: Gonococemia, senile purpura, and cutaneous vasculitis. As seen in above picture.

Distribution of the lesion

Linear: Lesions situated along a line. Linear lesion in patient with psoriasis, it is also



an example of Koebner phenomena that is seen here due to scratching of skin in patient with psoriasis.

Circinate: Lesion tending to form a circle.



Circinate lesion with scaling of the borders in a case of tinea manuum (Dermatophyte infection of the palm).

Annular: when the border of a lesion is more prominent than the central part of the lesion.

Geographical: when the lesion forms an irregularly shaped area.

Segmental: when the lesions are situated in a limited area conforming to a neural segment (dermatomal distribution).

Unilateral: when the lesions are situated only on one side of the body and stop at mid line.

Bilateral: when the lesions are situated on both the halves of the body.

Symmetrical: when the lesions are on almost mirror image of each other on the two halves of the body.

Topical Therapy:

Skin is the largest organ of the body, which provides a protective cover to the internal organs. The surface of skin measure 1.62 sq. meters in an average adult male and 1.43 sq. meters in an average adult female. Although the most superficial layer of skin is made up of dead cells, rather than being a dead covering for the body, it has several in built mechanisms for interacting with environment. Skin consists of three main layers, the outer-most epidermis, the deeper dermis and the deepest subcutaneous tissue. In addition, the skin has two appendages namely the hair and the nails, and three glands. So the skin is an important barrier that must be maintained in

order to function properly. Any insult that remove water lipids or protein from the epidermis altars integrity of this barrier and will comprise its function. Restoration of the normal epidermal barrier is a ccomplished with the use of mild soaps and emollient creams, ointment and lotion. One should observe an old and often-peated rule.”**If IT IS WET;IF IT IS WET DRY IT**”i.e if the patient has dry skin lesion give potassium permanganate compressed and cream or lotion to suppress inflammation, remove the crust and serum,so the lesion will dry then in this case change to ointment and stop others.

What are ointments?

Ointments are greases or grease-like substances, which at room temperature have abutter-like consistency. Some are used for their consistency; other may contain active ingredients. The commonly used base is petrolatum (Vaseline) which can keep the skin soft to great degree.

Indications for ointments:

- To relieves dryness, brittleness and fissuring of the skin.
- For gentle removal of crusts of impetigo and ulcers, or scales of psoriasis and chronic eczema.
- Can be used in hairy areas.
- Can be used as protective dressing for ulcerations.
- Carrying chemically active agents,as tar, mercury,or antibiotics,they can be used in chronic dermatoses and pyogenic infection.

Examples of ointments.

- Salicylic acid ointments
 - Salicylic acid 2-10
 - Vaseline 100
- Sulfur ointments
 - Sulfur ppt. 5-10
 - Vaseline 100

What are creams?

Creams are greasy preparations containing water, grease and inter powders. They have the cooling effect of lotions but they do not dry up so much owing to their

oily nature.

Example: Zinc oxide cream:

Zinc oxide 25

Lanolin 25

Olive oil 25

Aqua calcis 25

Vanishing cream to which specific active drugs as resorcin, sulfur precipitate or viofrm are added are suitable for the treatment of acne vulgaris, seborrhoeic dermatitis and rosacea and the late stages of eczema.

PASTS:

These are preparations, half of which is inert powder and the other half is grease.

Shake lotions or Drying Lotions

These are mixtures of powders, glycerin, water or aqua calcis and are used a paint like covering.

The powder settles at the bottom, so that they have to be shaken before use, hence the name shake lotions. After application they dry up rapidly hence the name drying lotion.

Calamine lotion is a very popular and useful lotion in many countries, which contain:

Calamine powder 10

Zinc oxide 5

Glycerin 3

Aqua 100

Shake lotion represents the dermatologist typical staring treatment for acute and subacute non-oozing dermatologist. It is also of great help when there is intolerance to ointments. Shake lotion treatments is contraindicated in the following:

a-Hairy areas where glycerin and powders will make the hair stick together.

b-On oozing surfaces where powders and serum will make hard mortar like masses and little clumps are liable to irritate mechanically and favor pyogenic infections and ulceration.

c-On the Scrotum because involuntary movements of the dartos muscle may cause pulling on scrotal hairs which are fixed in the tough mass of the dried lotion.

Wet Dressing and Soluble Lotion

These are used primarily in acute, weeping dermatoses for cooling antiseptic and cleansing effects.e.g.Aqueous potassium permanganate 1/5000-1/1000.

Impetigo

Impetigo is a superficial infection of skin caused by streptococcal or staph. Bacteria or both. It may be primary affecting especially the face and extremities or secondary to others disease like pediculosis capitis affecting the scalp or interglutal area and web space of hands as in scabies and also papular urticaria.



Bullous impetigo. Note the- bulla contains pus and fluid not surrounded with erythema, -erythema and crusts at the site of ruptured bulla in inner thigh of infant



Non-boullous (vesicular) impetigo, note the absence of the thin walled vesicles, presence of erythema and crusts around the mouth, it should be differentiated from lick dermatitis.



Ecthyma, note the lesion in the form of ulcer topped by crust and surrounded by erythema on the leg.

Clinical types of impetigo

1. Ordinary vesicular impetigo → *streptococcal* infection or *staph.* Or both of them..
2. Bullous impetigo → *staphylococcus aureus* infection.
3. Crusted impetigo: crusts are thick, big and remain adherent to the lesion for longer periods than used. This form is frequently present on the scalp complicating pediculaosis capitis.
4. Circinate impetigo.
5. Ulcerative impetigo (Ecthyma); lesions here more deep in which there are ulceration covered by thick crusts on healing leave scar usually found on the legs.
6. Impetigo neonatorum affecting new born baby esp. on axilla and groin, if infection extends to the umbilicus may lead to septicemia.

Fungal infection

There are about 100,000 species of fungi, most of that are saprophytes that break down vegetable and animal debris.

Morphologically they range from unicellular yeast to elongated chains of cells (hyphae), Many produced air born spores, which can be spread, over a vast area.

Fungi cause disease in human via there main routes:

1. Production of toxins or mycotoxins.
2. Allergy.
3. Tissues invasion.

Classification of common fungal infections (mycosis)

A- Superficial fungal infections includes:

1-Dermatophytosis (ring worm) and this classified according to the site of infection.

- (1) Tinea capitis indicates dermatophyte infection of scalp.
- (2) Tinea pedis (Athletes foot) indicates dermatophyte infection of foot.
- (3) Tinea cruris indicates dermatophyte infection of groin.
- (4) Tinea faciei indicates dermatophyte infection of face.
- (5) Tinea corporis (T. circinata) indicates dermatophyte infection of body.
- (6) Tinea manuum indicates dermatophyte infection of palmar surface of hands.
- (7) Tinea barbae indicates dermatophyte infection of beard.
- (8) Tinea unguium (onychomycosis) indicates dermatophyte infection of nail.

2-Malassezia infections includes:

-Pityriasis versicolor.

-Seborrhoeic dermatitis.

-Malassezia folliculitis.

3-Candidal infection.

4-Others e.g. black piedra, white piedra.

B- Subcutaneous fungal infections includes:

-Mycetoma-sporotrichosis-chromoblastomycosis

C- Systemic fungal infection includes:

-Histoplasmosis . -Blastomycosis . - Paracoccidomycosis .

-coccidomycosis . -Pencillium marneffiei

D- opportunistic mycosis includes:

-Systemic Candidiasis. -Aspergillosis. -Cryptococcosis. -Mucormycosis.



Tinea cruris. see the active margin of the lesion and healing of the center.



Tinea (Pityriasis)versicolor. On white skin these lesions appear as darker, red or brown macules, but paradoxically on darker skin some hypopigmentation is seen.



Intertrigo(erythema and maceratrion in skin folds that contact with each others. Which may be secondary invaded by Candida species, especially ,*C.albicans*. It should be differentiated from *T.cruris*.



Intertrigo secondary infected with *Candida species* .It is a common problem of a housewives and those who's works needed excessive use of water and soaps which leads to maceration of skin and easily invasion by Candidiasis .

Erythrasma. A Cutaneous infection caused by *Corynebacterium minutissimum*. Presented with a symptomatic, reddish-brown area of skin, commonly in body



flexures, particularly the groin, diagnosed by Wood's light examination which give coral-red fluorescence that differentiated it from superficial fungal infection(*T.cruris*). As seen in this picture.

Common Cause of irritable papular skin Rash

- 1-Scabies
- 2-Insect bites
- 3-Atopic dermatitis
- 4-Contact dermatitis
- 5-Lichen planus
- 6-Dermatitis herpiformis

Causes of Scaly scalp disorders:

- 1-Dandruff
- 2-Psoriasis
- 3-Contact dermatitis
- 4-Tinea Capitis in children and old ages.
- 5-Atopic eczema affecting the scalp.
- 6-Neurodermatitis of scalp .
- 7-Lupus erythematosus
- 8-Exfoliative dermatitis
- 9-P.R.P.(Pityriasis rubra pilaris).

Disorders of Pigmentation

Causes of Hyperpigmentation of the Face

- 1-melasma
- 2-post inflammatory hyperpigmentation.
- 3-post frictional hyperpigmentation
- 4-phytophoto dermatitis .
- 5-Lichen planus actinicus.

Diffuse hyperpigmentation.(Hyper melanosis)of Skin

- (1) post inflammatory hyperpigmentation.
- (2) Becker naevus .
- (3) Naevus spilus.

The common causes of Hypopigmentation.of Skin

- 1- Vitiligo .
- 2- Post inflammatory hypopigmentation.
- 3- Pityriasis alba.
- 4- Post burn leukoderma(white skin)
- 5- Post steroid leukoderma .
- 6- Chemical vitiligo .
- 7- Halo naevus(pigmented naevus surround by white ring)
- 8- Oculocutaneous Albinism .
- 9- Phenyl ketonuria .
- 10- Piebaldism .
- 11- Others

Vitiligo

Vitiligo is an acquired condition affecting 1% of all races, in which circumscribed depigmented patches develop.

Etiology; there is complete loss of melanocytes from affected patches. There may be a positive family history of the disorder especially in those with generalized vitiligo and this type may associated with autoimmune diseases such as diabetes, thyroid and adrenal disorders and pernicious anemia. Trauma and sunburn may precipitate the appearance of vitiligo.

Clinical features and types:

-Segmental vitiligo :is restricted to one part of the body but not necessarily a dermatome.

-Generalized vitiligo: is often symmetrical and frequency involves the hand, wrists, knees and neck of as well as of the area around the body orifices.

-The hair of the scalp and beard (Grey hair)may also depigmented.

-Complete universal type: all the skin becomes depigmented except small normal areas on the face.

-Halo naevus : Formation of white depigmented ring around pigmented melanocytic - Ocular type(changing in the color of the eyes).

naevus.

-Occupational type(substituted phenolic compounds and therapeutics like monobenzyl ether of hydroquinone(Benoquin 20) .

The patches of depigmentation are sharply defined and in some patients may be surrounded by hyperpigmentation, some spotty perifollicular pigment may be seen within the depigmented patches and this is the first sign of repigmentation. Sensation in the depigmented patches is normal and in this differentiated from tuberculoid leprosy.

What are the bad prognostic signs in vitiligo?

- 1- When there is leukotrachia(white hair).
- 2- Involvement of distal acral area.
- 3- Presence of active koebner phenomena.
- 4- Rapid progressive course.
- 5- Universal vitiligo(involve all the skin).
- 6- Patient with unstable psychology.

Types of psoralin

1,5 methoxy psoralin (oil of bergamot)topical and oral tablet 6-8 mg/Kg.

2,8 methoxy psoralin(Topical meladinin).

1,5,8 Trimethyl psoralin as tablet 0.5 mg/Kg B.wt

Important disorders of body folds

- (1) Intertrigo (A red, macerated, swelling, fissuring and pain in the skin folds such as retro-auricular area, interdigital fold, groin, axillary or any other skin fold is called Intertrigo).
- (2) Infection includes
 - (a) Candida.
 - (b) Dermophyte.
 - (c) Erythrasma.
- (3) Psoriasis.

-Exudation and cracking

-Scaling

in chronic

-May show all of the above features, though it is usually less vesicular.

-Lichenification, a dry leathery thickening with increased skin markings is secondary to rubbing scratching.

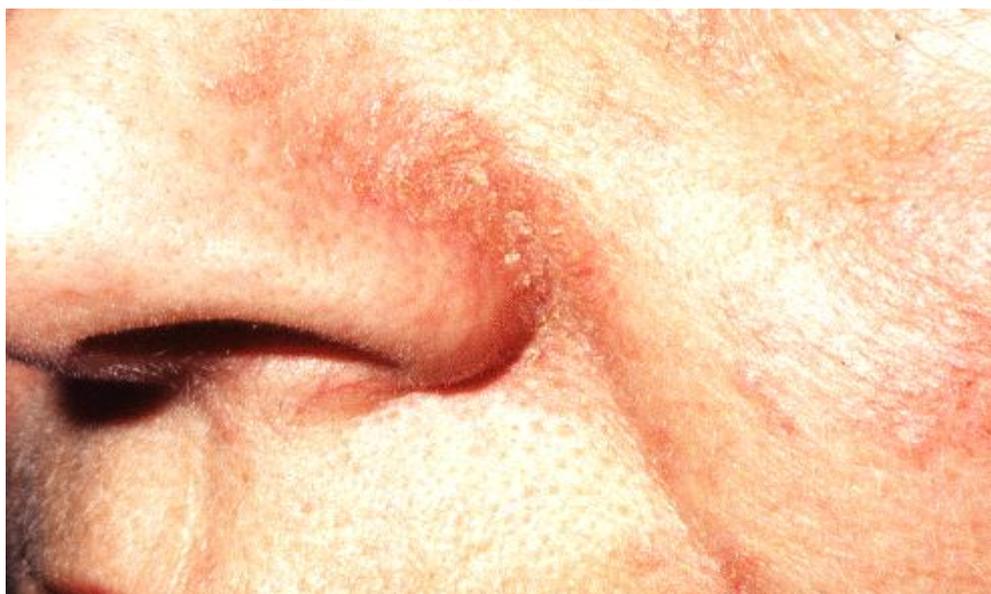
-fissures and scratch marks.

-Pigmentation.

Seborrhoeic dermatitis of adult face.



Infantile seborrhoeic dermatitis.

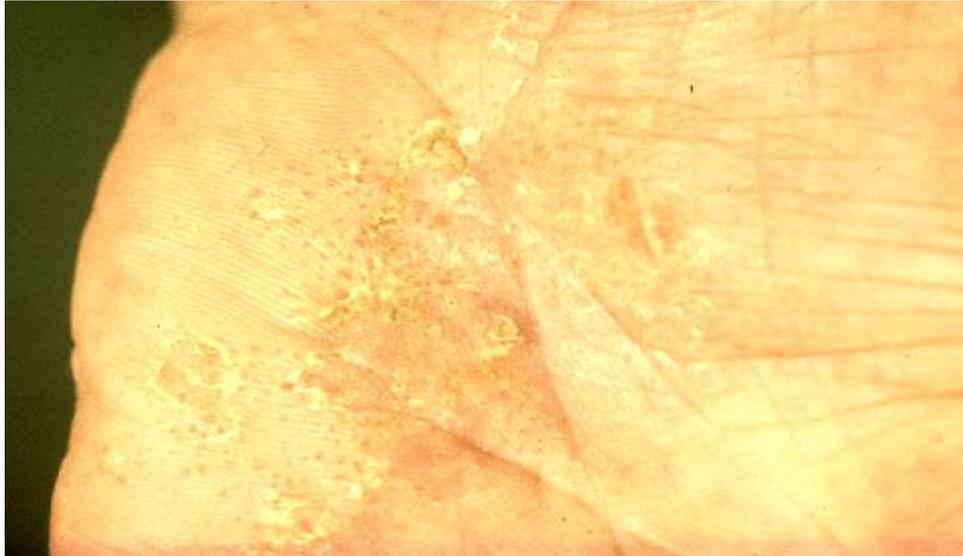




Pityriasis alba .



Atopic dermatitis, infantile type.



Pompholyx. A type of endogenous eczema.

Differential Diagnosis of Eruptions in the Diaper area

- Intertrigo due to heat and maceration.
- Contact dermatitis.
- Allergic primary irritant dermatitis(especially ammonical) ,that is commonly seen in infants and children due to the effects of napes that left for long time unchanged,in which bacterial urease enzyme causes separation of urine into urea (which changes into ammonia) and amino acids that leads to inflammation,and clinical appearance of redness and maceration.
- Infantile seborrhoeic dermatitis with secondary Candidiasis.
- Primary Candidiasis.
- Miliaria -Bullous impetigo.
- Granuloma gluteale infantum

What are the common skin disease affecting the hands ?

(A) Back of the hand :-

- | | |
|---------------------|-------------------------------|
| 1-Atopic dermatitis | 2-Irritant contact dermatitis |
| 3-Neorodermatitis | 4-Discoid |

5-Psoriasis

6-Tinea circinata

7-Bacterial infection

8-Scabies(web space and sides of hands)

(b) Palmer surface of the hand:-

1-Psoriasis

2-Pompholyx

3-Bacterial infection

4-Tinea mannum

5-Allergic contact dermatitis

6-Keratolysis exfoliativa

7-Finger tip eczema

Psoriasis

Psoriasis is a non-infectious inflammatory disease of the skin characterized by well-defined erythematous plaques with large, adherent, silvery scales.

The main abnormality in Psoriasis is increased epidermal proliferation due to excessive division of cells in the basal layers. The epidermal turn over time falls from 28 to 4-6 days .

Factors causing flair-ups of Psoriasis

(1)Trauma : when psoriatic lesion appears in area of skin damage such as scratches or surgical wounds this called koebner phenomena.

(2)Infection :B- hemolytic streptococcal throat infections often preceded the guttate psoriasis .

(3) Sun light Rarely, ultraviolet radiation may worsen psoriasis.

(4) Drugs :Antimatarials like chloroquine , B-adreno receptor antagonists, salicylates,iodides ,nystatin ,progesterone and lithium may worsen psoriasis ,and the rash may rebound after stopping systemic corticosteroids or potent local corticosteroids .

(5)Emotion upset and Anxiety precipitate some exacerbation.

The sites commonly involved:-

* Elbows , Knees and lower back and also other sites might involved includes

- Scalp in a whole or part of it .
- Nails changes includes :-pitting ,riding ,onycholysis(separation of the nail from nail bed) ,discoloration and subungnal hyperkeratosis.
- Flexures (Here the lesion is not scaly but only red and glistening and symmetrical).

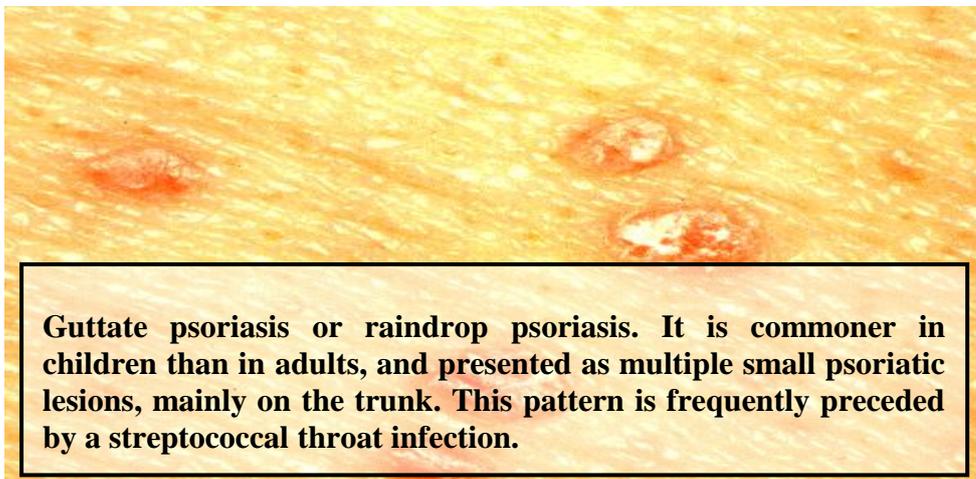
- Palms and soles .
- Napkin area .

Clinical types of psoriasis

- | | |
|----------------------------------------------------------------------------------------------|--------------------------|
| 1- chronic plaque psoriasis | 2- Guttate Psoriasis |
| 3-Flexural Psoriasis | 4-Psoriasis of scalp |
| 5- Psoriasis of palms and soles | 6-Psoriasis of the nails |
| 7- Erythrodermic Psoriasis | 8-Psoriasis of the joint |
| 9- Pustular Psoriasis (includes:generaliz ,palmoplantar and pustular psoriasis of pregnancy) | |
| 10- Napkin Psoriasis | |



Psoriasis vulgaris (plaque type). See the well-defined erythematous plaques with white silvery-scales. It should be differentiated from T. corporis, and discoid eczema





Flexural psoriasis.



Psoriasis of scalp



Erythrodermic psoriasis.

Erythroderma :is defined as erythema with or without scaling of almost all the body, the causes are:

- 1- Eczema (contact,Atopic,seborrhoeic) .
- 2- Psoriasis
- 3- Drug eruption(gold,isoniazid)
- 4- Cutaneous T cell lymphoma (sezary syndrome) might progress to erythroderma, which defined as erythema with or without scaling of almost all, the body surface.
- 5- Other causes include lichen planus .
- 6- Psoriasis like conditions(pitriasis rubra to pilaris) .
- 7- Lchtyosiform erythroderma .
- 8- Pemphigus erythrematosus .
- 9- Scabies .

Erythroderma may occur at any age and is associated with extreme morbidity and

appreciable mortality. It may appear suddenly or evolve slowly .



Erythroderma, note the generalized erythema and scaling.

Complications of erythroderma:

- Erythrodermic patients may be systemically unwell with shivering due to loss of temperature control and pyrexia .
- The pulse rate is elevated and the blood pressure low due to volume depletion (due to increase skin blood flow).
- Peripheral edema is common finding consequent on the erythroderma, low albumin (due to loss of protein from skin) and high output cardiac failure .
- Reduced barrier function due to abnormal stratum corneum (resulted in increased percutaneous water loss leading to dehydration).
- Associated gut changes (mild mal absorption) .
- Anemia .

- Lymph nodes may be enlarged, either reactively, caused by the skin inflammation, or secondary to lymphatous infiltration.

The sudden wide spread scaly rash (papule-squamous eruptions) without itching is due to :-

- (1) Pityriasis rosea
- (2) Lichen plauns
- (3) Guttate psoriasis
- (4) Secondary syphilis
- (5) Eczema (seborrhoeic & Atopic or contact)
- (6) Drug eruption
- (7) Pityriasis versicolor(tinea versicolor)

Pruritus (itch)

Pruritus is defined as sensation that provokes the desire to scratch and the scratch reflex is the removal of noxious agents from the body surface. Impulses carrying the sensation on the itch passing from the nerve endings in the region of the dermo-epidermal region along the sensory spinal nerves to the spino-thalamic tract and then to the thalamus and sensory cortex. These pathways are shared by the sensation of pain. To know the severity of itching depends on the history, aided by the presence or absence of signs of scratching and rubbing and excoriation, broken hairs and polished nails. The term Pruritus sometimes used when there is itching with no visible skin disease.

Medical conditions that causes Pruritus

- 1- Liver disease like cholestasis and Hepatitis (elevated bile salt).
- 2- Chronic renal disease (secondary hyperparathyroidis and elevated plasma histamine) .
- 3- Blood disease especially iron deficiency anemia, polycythemia rubra Vera, lymphoma, leukaemia and hypothyroidism.
- 4- Thyroid disease :thyrotoxicosis and hypothyroidism .
- 5- HIV infection .
- 6- Internal malignancy .

7- Psychogenic .

Some skin disease causing itching

- Scabies, pediculosis, insect bites .
- Contact and atopic dermatitis.
- Lichen planus .
- Dermatitis herpetiformis .
- Toxic eruption
- Fungal infection .
- Pityriasis rosea .
- Seborrhoeic dermatitis .
- Psoriasis .
- Sun burn .
- Asteototic skin .
- Urticaria and dermographism.

Coarse feature of face is seen in

- Hypothyroidism . -Lipoid protenosis .-Leprosy .
- Out – door workers . -Acromegaly .
- Others

Saddle nose is caused by

- Trauma.
- Leprosy .
- Congenital syphilis .
- Malignancy .

Differential diagnosis of Malar flash

- In normal .
- Working out – door .
- Mitral stenosis .
- Polycythemia .
- Steroid therapy .

Differential diagnosis of butterfly erythema on the face

- 1- Discoid lupus erythematous (DLE) .
- 2- SLE .
- 3- Psoriasis .
- 4- Contact dermatitis .
- 5- Seborrhoeic dermatitis.
- 6- Lups vulgaris .
- 7- Necrobiosis lipoidica can give fascail lesions like DLE.



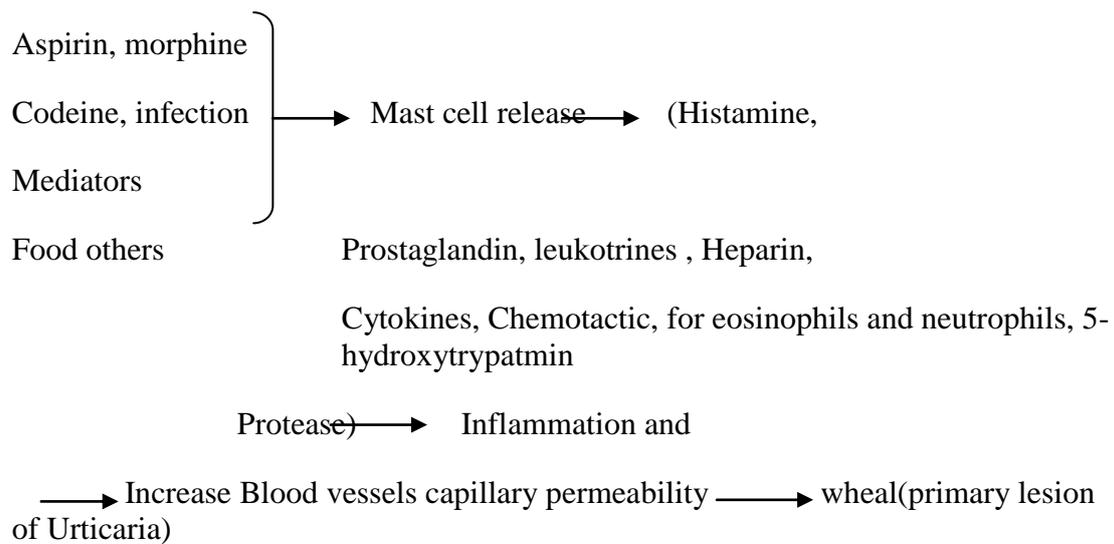
Erythema of the face.

Important causes of red face :-

- 1- Rosacea .
- 2- Steroid red face .
- 3- Seborrhoeic dermatitis .
- 4- Contact dermatitis .
- 5- Atopic dermatitis .
- 6- Peri oral dermatitis .
- 7- Psoriasis .
- 8- Light sensitivity .
- 9- Lupus erythematosus .
- 10- 10Dermatomyositis .
- 11- Erysipelas .
- 12- Port wine stain (naevus flammeus)
- 13- Vaso motor instability .
- 14- Carcinoid syndrome .
- 15- Superior vena caval syndrome.

Urticaria

Urticaria is a common reaction pattern characterized by the presence of itchy or burning, edematous swelling (wheals) occurring anywhere on the body and lasting for less than 24 hours if it lasted more than 24 hours is called urticarial vasculitis (caused by hepatitis B viral infection, systemic lupus erythematosus, or of idiopathic cause). Acute Urticaria may be associated with more diffuse swelling (angioedema) of the lips, face and throat and rarely, wheezing, abdominal pain, headaches and even anaphylactic shock. Severe angioedema can be life threatening due to respiratory obstruction. The symptoms of Urticaria and angioedema are due to mast cell degranulation with release of histamine and other mediators, which will lead to vaso dilatation and transudation of fluid into the dermis. The mechanism is as follows.



Causes of Urticaria

Acute and chronic Urticaria (Acute urticaria of less than 6 weeks duration, if more than 6 weeks duration is the chronic).

- Allergens (in food, inhalants and injection)
- Drug(Asprin,morphin,codein,.....Others)
- Contact (e.g. animal saliva,latex)
- Physical(e.g.; heat, cold, pressure, sun, exercise, water)
- Infection(e.g. viral hepatitis ,infections mononucleosis, HIV, Parasitic infection,....etc)
- Other conditions (e.g. systemic lupus erythematosus, autoimmunity, pregnancy, intestinal parasites)
- Idiopathic.



Urticarial wheal.

Lichen planus

Lichen planus is a condition characterized by intensely pruritic, purple color, polygonal, plan surface papules involving the flexor surfaces of wrists, forearms, legs and genitalia and mucus membranes and some times become generalized. The papules are covered with fine white network on their surface (wickhams striae), on the mucus membrane of the mouth or genitalia called (lacy network).

Lesion may appear at the site of trauma (Koebner phenomenon). Nail changes occur in 10% of the cases ranging from longitudinal grooving and ridging to destruction of the nail fold and bed.

Clinical typed of lichen planus

- 1- Common (localized) papular type .
- 2- Actinic .
- 3- Annular .
- 4- Atrophic .
- 5- Erosio ulcerative .
- 6- Hypertrophic .
- 7- Follicular (lichen Plano pilaris).
- 8- Guttate (numerous small papules)
- 9- Linear
- 10- Nail involvement .
- 11- Vesiculo bullous type .



Nails changes of lichen planus.



Lichen planus of mucus membrane of the mouth. Note the lacy network(Wickhams striae).



Lichen striatus. (see the linear distribution of the lesion)

Viral warts

Viral warts are benign epidermal proliferation, caused by infection with human papilloma virus (HPV) which is a type of DNA virus. The transmission of HPV occurs by close contact with an infected person. Autoinoculation is responsible for the local spread of the warts. Many factors are responsible in the infectivity of HPV including the number of viral particles, the degree and duration of the exposure and the host's defense against HPV infection. Cell mediated immunity is important in the host defense against HPV. To date 55 HPV types have been identified.

The common clinical types of viral warts are: -

- (1) Common warts (verruca vulgaris)

- (2) Fili form warts .
- (3) Flats warts (plane warts) .
- (4) Plantar warts .
- (5) Anogenital warts .
- (6) Subungul and periungal warts .
- (7) Mucus membrane warts includes – oral common warts
 - Nasal papilloma.
 - Conjunctival papilloma .
 - Oral condylomata acuminate .
 - Laryngeal papillomatosis.
 - Cervical warts .



Common warts.



Genital warts (condylomata acuminata).



Planter wart.(verruca plantaris).

Disorders of the nails

The condition of the nails may reflect both local and systemic disease, and omission of this part of the general examination could result in some important diagnostic clues being over looked.

The nail plate arises from the nail matrix and lies on the nail bed .The keratinous plate are produced by cells of the matrix and to a much lesser extent, the bed. Fingernails grow about 1 cm every 3 months and toe nails at about one – third of this rate.

Paronychia: Is one of the most common infections of the hand. Clinically

presented as *acute or chronic*. It is a localized superficial infection or abscess of the nail folds of the hands or less commonly the feet. Any disruption of the skin between the nail folds and nail plate provided a portal of entry of bacteria and or fungi.

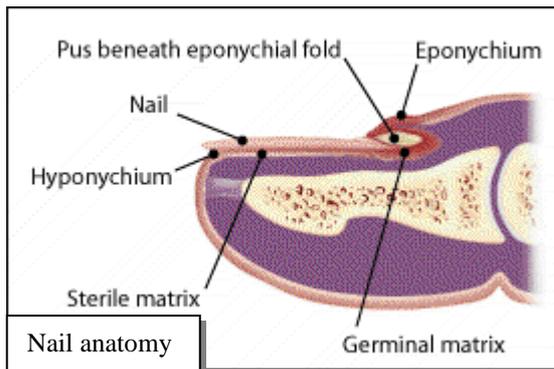
Acute paronychia: Acute inflammation of fingernail or toenail folds leading to sudden of swelling, warmth and redness. It is caused by infection of the damaged or traumatized skin by *Staphylococcus aureus*, and sometimes also by *Candida albicans*, *Herpes simplex* virus infection (herpetic whitlow) and Gram-negative bacilli.

Acute paronychia



Chronic paronychia: is chronic inflammation of the nail folds, produces occasional discharge of pus, cushion like thickening of the paronychial tissue, slow erosion of the lateral borders of the nails, gradual thickening, brownish discoloration of the nail plate and the development of pronounced transverse ridges. It is a common problem of the housewives, dishwashers, housekeepers...etc, as well as diabetic and immunesuppresses person, in addition metastatic cancer, subungual melanoma, and squamous cell carcinoma may present as chronic paronychia. The cuticle and nail folds may separate from the nail plate (especially due to moisture from excessive use of water and soaps), forming a space for invasion of *Candida albicans*, *Staphylococcus aureus*, or *Staphylococcus epidermidis*, and Gram-negative bacilli (*Pseudomonas aeruginosa*, *E.colli*, *Proteus species*).

Treatment: - Avoiding the predisposing factors such as prolonged exposure to water, manicure, nail trauma, and finger sucking- Use cotton gloves underneath rubber gloves for all wet work. – Give topical (antibiotic combined with steroid for one week then stop steroid and continued on antibiotic) together with topical antifungal like clotrimazole 1%. In unresponsive cases to this therapy, malignancy should be excluded.



Chronic paronychia

Splinter hemorrhage: these are fine linear dark brown flecks running longitudinally in the plate. They are most commonly to trauma but they may be seen in psoriasis. They are also sign of bacterial endocarditis, SLE and rheumatoid arthritis.

Onycholysis

Onycholysis is painless separation of the nail plate from nail bed due to many causes :-

- (1) Dermatological disease; psoriasis, dermatitis, Dermatophyte or Candidal infection.
- (2) Trauma .
- (3) General medical conditions; impaired peripheral circulation, hypothyroidism and hyperthyroidism.
- (4) Hereditary partial onycholysis.
- (5) Drugs e.g. tetracycline + sunlight.

In case of recalcitrant and long lasting

Onycholysis you should think of :-

- Post traumatic scar in the nail bed .
- Dermatophyte infection .
- Tumor of the nail bed and especially malignant melanoma (Nail pigment streak and pigmentation of the posterior nail fold (Hutchinson's sign) is diagnostic of a melanoma affecting the nail matrix, with migration of pigment cells on the posterior nail fold and longitudinal nail biopsy through the streak will confirm the diagnosis).

Beau's lines: These are transverse grooves which appear at the same time on all nails a few weeks after stress or acute illness that temporarily interrupt nail formation. The lines progress distally with normal nail growth and eventually disappear at free edge.

Spoon nails: Lateral elevation and central depression of the nail plate causes the nail to be spoon shaped; this is called kolonychia. Spoon nails are seen in normal children and may persist lifetime without any associated abnormalities. It is also a sign of iron deficiency anemia and in 50% of patients with idiopathic hemochromatosis. The nail reverts to normal when the anemia is corrected.

Finger clubbing: Is a distinct features associated with a number of disease, but it may occur as a normal variant .The distal phalanges of fingers and toes are enlarged to a rounded bulbous shape. The nail enlarges and become curved, hard, and thickened. The angle made by the proximal nail fold and plate increase and approaches or

exceeds 180 degrees and when both thumb nail put in contact will form open window while in normal it form closed window.

Causes of finger clubbing

- (1) Respiratory; bronchogenic carcinoma, asbestosis, suppurating lung disease (empyema, bronchiectasis, cystic fibrosis), fibrosing alveolitis.
- (2) Cardiac; cyanotic congenital heart disease, subacute bacterial endocarditis.
- (3) Gastrointestinal; ulcerative colitis, crohn's disease, celiac disease, biliary cirrhosis.
- (4) Endocrine ,thyrotoxicosis
- (5) Familial .

White spots or bands of the nail (leukonychia punctate)

. White spots in the plate are a common finding ,which possibly result from cuticle manipulation or other mild form of trauma . The spots or bands appear at the, unguis or appear spontaneously in the nail plate and subsequently disappear or grow out with the nail.

Whitening of the nails

Is a rare sign of hypoalbuminoemia, half-and-half nail (white proximally and red – brown distally) are seen in some patients with renal failure. Rarely, drugs (e.g. antimalarials) may discolor nails.

Ingrown toe nail

Ingrown toenail is common; the large toe is most frequently affected, the nail pierces the lateral nail fold and enters the dermis, where it acts as a foreign body .The first signs are pain and swelling .The area of penetration becomes purulent and oedematous as granulation tissue grows alongside the growing nail. Ingrown nails occur from lateral pressure of poorly fitting shoes, improper or excessive trimming of the lateral nail plate or after trauma.

Hair too little or too much hair fall

A patient who complains of too little or too much hair fall should be treated with sensitivity. This complaint may cause genuine morbidity. The causes are numerous and varied but a systemic approach to the history and examination can easily be used to elicit the correct diagnosis. Hair undergoes a regular cycle of growth.

Each cycle is independent of its neighbors in humans. At any one time and depending on the age and sex of the person, up to 90% of hair follicles can be in anagen (the growing phase), and only 10% in telogen (the resting phase), when hairs are normally shed. An alteration in this ratio can lead to an increased rate of hair loss and thus an impression of impending baldness.

Alopecia

Means nothing more than loss of hair, which of two types localized or diffused and both of them are scarring or non-scarring alopecia.

Causes of Localized hair loss:

A – non-scarring

- (1) Traumatic alopecia
 - a- Neonatal frictional alopecia .
 - b- Trichotillomania .
 - c- Tractional alopecia .
 - d- Pressure alopecia .
 - e- Hot –comb alopecia .
- (2) Alopecia areata .
- (3) Tinea capitis .
- (4) Post –pyogenic infection and secondary syphilis.

B- Scarring alopecia:

- 1- Idiopathic. 2- Developmental defect and h
- 3-Physical injuries like Burn, Mechanical trauma, Radiodermatitis.
- 1- Infections like tinea capitis (kerion),herpes zoster .
- 2- Dermatitis of unknown origin like discoid lupus erythematosus scleroderma ,sarcoidosis .
- 3- Pseudopelade .

Causes of Diffuse hair loss

A- Non – scarring:-

1- Androgenic alopecia

- . In women → fronto - vertical hair thinning
- In men → bitemporal and vertical hair thinning

2- Alopecia areata .

3- Telogen effluvium (fevers, post labor 4-8 months, post major surgery and sever blood loss).

4- Metabolic and endocrine disorders: Hypothyroidism, hyperthyroidism, hypopituitraism and diabetes mellitus.

5- Nutritional deficiency.

6-Drugs especially cytotoxic .

7- Liver disease.

8- HIV disease.

9-Sever chronic illness

B- Diffuse scarring Alopecia :-

- Discoid lupus erythematosus – Radiotherapy.
- Folliculitis decalvans – lichen planus pilaris.

The bad prognostic sign in alopecia areata

- 1- Alopecia areata in atopic patient.
- 2- Rapid progression .
- 3- The loss of eye browns and eye lashes .
- 4- Sever nail changes (Nail pitting ,dystrophy and pigmentation) .
- 5- Ophiasis (the loss of hair of back and sides of scalp).
- 6- Loss of hair in reticular pattern .
- 7- Alopecia totalis and universailis.

Hypertrichosis and Hirsutism

Hypertrichosis: when the hair grow longer, coarser or more profuse than in normal for the site, age and sex in any area of the body other than androgen – dependent hair

pattern and the cause either: -

a- (Congenital) or b- (Acquired): is due to :

- 1- Drugs like minoxidil, Cortisone, Diazoxide, Streptomycin, PUVA and Pencillamine or seen in.
- 2- Malnutrition or with .
- 3- Anoroxia nervosa .

Hirsutism: is the growth in the female of coarse terminal hair in part or the whole adult male sexual patterned transition of vellous to terminal hair is induced by androgen hormone and it has many causes; -

- 1- Primary (racial or idiopathic) .
- 2- Adrenal diseases like virilizing adrenal tumor, Cushing syndrome.
- 3- Ovarian diseases like; polycystic ovarian syndrome, virilizing ovarian tumor, and pure gonadal dysgenesis.
- 4- Pituitary disorders like acromegaly /
- 5- Male pseudohermaphroditism.
- 6- Iatrogenic .
- 7- Ectopic virilizing tumor .
- 8- Stress [Segre claims that lack of peace of mind is both a cause and result of hirsutism].

Pathogenesis of primary or idiopathic or racial

hirsutism

It is accounted for 57% of Iraqi women hirsutism, and occurs due to the following causes: -

- 1- Genetic factor ;30% of cases has positive family history .
- 2- Minor ovarian dysfunction .
- 3- Increase activity of 5 α - reductase enzyme (which leads to increase conversion of dihydra testosterone to androstein dione).
- 4- Increase sensitivity of hair follicles receptors to androgen.
- 5- Decrease of sex – hormone-binding globulin.

Premalignant conditions of skin are

- 1-Solar keratosis.
- 2-Cutaneous horn.
- 3-Bowen's disease.
- 4-Erythroplasia of queyrat.
- 5-Leukoplakia.
- 6-Leukoplakia of the lips.
- 7-Post – irradiation keratosis .
- 8-Tar keratosis.
- 9-Long lasting scarring, (sinus, ulcers and granulomatous disease).

Diseases cause increase turn over of keratin are :-

- 1-Psoriasis.
- 2-Pityriasis rubra pilaris.
- 3-Seborrhoeic dermatitis.
- 4- lichnoid eczema
- 5- Non –bullous Ichthyosiform erythroderma.

Different diagnosis of genital ulcers

A-Sexually transmitted disease :-

- 1- Sexual Trauma.
- 2- Primary syphilis .
- 3- Cutaneous manifestations of secondary syphilis.
- 4- Herpes progenitalis .
- 5- Chancroid .
- 6- Scabies .
- 7- Gummatous Ulceration of tertiary syphilis.

8- Lymphogranuloma venerium

9-Granuloma Inguinale.

B- Non-sexually transmitted disease

1-Fixed drug eruption .

2-Behcet disease.

3-Erosive balanitis.

4-Benign and malignant tumor of genital area.

5-Herpes zoster.

6-T.B. of skin.

What is the different diagnosis of genital Elephantiasis?

- (1) Filariasis .
- (2) Donovanosis (Granuloma inguinale).
- (3) Tuberculosis of genitalia .
- (4) Parasitic or fungal infection .

What sexually transmitted pathogens of viral origin may be transmitted from the mother to the neonate?

- (1) Herpes simplex.
- (2) Human papilloma virus .
- (3) Hepatitis B virus .
- (4) Cytomegalo virus .
- (5) HIV .

Urethral discharge in men

<u>Disease</u>	<u>Causative organism</u>
1-Gonococcal urethritis	<i>Neisseria gonorrhoeae</i>
2-Non-Gonococcal urethritis	<i>Chlamydia trachomatis</i> <i>urea plasma urealyticum</i>

Trichomonas vaginalis

Candidal infection

Herpes simplex viral infection

For Urethral discharge in female the same causes above with addition of (3- secondary to upper urinary tract infection).

Pathological causes of vaginal discharge

1. Genorrhoeae.
2. Non-gonococcal urethritis .
3. Candidal vulvo – vaginitis .
4. Trichomoniasis .
5. Herpes simplex genitalis
6. Senile vulva discharge .
7. Secondary cervical erosion , polyps and foreign body .
8. Secondary to supra – cervical disease.
9. Chemical or mechanical trauma to vulva .

Complications of gonorrhoea in men

- 1- Epididymitis both acute and chronic .
- 2- Urethral stricture .
- 3- Acute and chronic prostatitis and prostatic abscess .
- 4- Arthritis (occur with gonoccal septicemia)
- 5- Tysonitis .
- 6- Littritis .
- 7- Paraurethral abscess .
- 8- Periurethral abscess → Urethral stricture.
9. Cow peritis . 10-Vesiculitis . 11-Cystitis (trinitis)

Complications of gonorrhoea in female :-

occurs most commonly in West Africa. Both cause AIDs and the routes of transmission are the same. However, HIV.2 transmission is slightly less easy and HIV.2 may cause slower progression to HIV-related infections and AIDs.

In adults, there is a long and variable latent period from HIV infection to the emergence of HIV-related infections and AIDs. An adult infected with HIV may have no symptoms for 10 years or more. But almost all (if not all) HIV-infected people will develop HIV-related disease or AIDs. (The period with out symptoms is shorter in children). Infectious diseases are the immediate cause of death in over 90% of people with advanced HIV infection.

Though the term AIDs is widely used, for medical purposes, it has been replaced by stage-by-stage classifications of HIV infection. AIDs refers only to the late stages of immune suppression.

How is HIV transmitted?

HIV is found in blood, semen, and vaginal fluid and breast milk. The virus can be transmitted through:-

- Exchange of HIV-infected body fluids such as semen, vaginal fluid or blood during unprotective vaginal or anal sexual intercourse. Other sexually transmitted diseases increase the risk of HIV transmission. World wide the most important route of transmission is through heterosexual intercourse.
- Blood, including contaminated blood transfusions, medical, surgical or dental equipment, intravenous drug injection, and skin piercing instruments.
- Pregnancy, births, or breast feeding if the mother is infected with HIV.

Impotence

Impotence is defined as the persistent failure to develop erections of sufficient rigidity for penetrative sexual intercourse. The disorder is strongly related to age, with an estimated prevalence of 2% at the age 40 years, rising to 25 0 30 % by the age of 65 % and about 50 % over the age of 75 % years.

Although impotence dose not affects life expectancy, it can have a strong negative effect on well being and quality of life. The causes of impotence are: -

- Psychological impotence.
- Neurological impotence especially resulted from lesion of cauda equina (due to, for example, to a prolapsed intervertebral disc) and peripheral neuropathies affecting the S 2 – S 4 outflow (most commonly due to diabetes mellitus or alcoholism) are associated with impotence. Upper motor neurons lesion resulting from multiple sclerosis or spinal or spinal reflex arcs from their midbrain, hypothalamic and cortical controlling mechanisms.

- Endocrinological impotence: - falling testosterone concentrations with increasing age or associated with loss of libido and reduced frequency of erection.-Decrease potency may be an early feature of hyperprolactinaemia. Raised prolactin concentration is also associated with reduce circulating free testosterone, but simply restoring normally levels of circulating and ranges often dose not restore sexual function. Hyperprolactinaemia may be associated with drug use, renal failure, or pituitary tumors, or it may be idiopathic.
- Vascular (venous, arterial) the risk factors are smoking, hypertension.
- Traumatic.
- Iatrogenic (drugs and surgery) .

Possible causes of recurrent mouth ulcers :-

- 1- Minor aphthous .
- 2- Major aphthous.
- 3- Herpes simplex (stomatitis) .
- 4- Behcet disease .
- 5- Fixed drug eruption.

Possible causes of mouth ulcers

- 1- All above of recurrent mouth ulcers .
- 2- Trauma, burn.
- 3- Infection like – syphilis {(primary chancre), secondary: (Snail tract mucus patch), Tertiary: punched out ulcers of syphilitic gumma)}.
– H.Zoster -Herpengina.
- 4- Blood disease :anaemia ,leukemia .
- 5- Gostrointestinal disorders like ulcerative colitis and crohn’s disease caused aphthous in mouth.
- 6- Drugs.
- 7- Malignant.
- 8- Cutaneous disease: lichen planus, Pemphigus vulgaris, Erythema multiforme, mucus membrane pemphigoid, and lupus erythematosus.

Specific Dermatosis of pregnancy: -

- 1- exacerbation of preexisting disease .
- 2- Co –incidental acquired disease e.g. scabies .
- 3- Disease which are specific in pregnancy, according to the primary lesion.
 - a- No lesions, only itching and excoriation (Pruritus gestation).
 - b- Pruritic papuler and plaque of pregnancy or erythema multiforme or polymorphic eruption.
 - c- Vesico –bullous disease include :-
 - 1) Herpes gestation (Bullous pemphigoid of pregnancy).
 - 2) Generalize pustular psoriasis of pregnancy.

Common Non – ulcerating skin lesions on the legs :-

- | | |
|---------------------------------|------------------------------|
| 1-Erythema nodosum. | 2- Cellulitis and erysipelas |
| 3- Lichen planus hypertrophicus | 4-Pretibial myxedema |
| 5-Necrobiosis lipoidica | 6- Atrophie blanche. |





Necrobioses lipoidica.



Cutaneous leishmaniasis (Baghdad boil).

