

Class 4 PHE Class Notes

PE of the skin

1. Skin examination – begins with general survey, and continuous through examination
 - a. Color
 - b. Moisture
 - c. Temperature
 - d. Texture
 - e. Mobility and turgor
 - f. Lesions
2. Dermoscope (Dermoscopy) – allows differentiate malignant from nonmalignant lesions. Can increase sensitivity and specificity of examination.

Techniques of examination

1. Seated – all the body
 - Inspect hair and scalp (Distribution, texture, quantity)
 - Inspect head and neck
 - Inspect the upper back
 - Inspect the shoulders, arms, hands, palpate fingernails
 - Inspect the chest and abdomen
 - Inspect the anterior thigh and legs
 - Inspect the feet and toes
2. Standing – lower back, posterior thighs and legs, breasts, axillae, genitalia
3. Alternate position – supine then prone
4. Skin self-exam – with the full body mirror
 - a. Front and back with arms raised
 - b. Abduct arms and flex elbows – forearms, underarms, and palms
 - c. Back of the legs, space between toes, and soles
 - d. Hand mirror to back of head/neck, and buttocks
5. Skin cancer – Basal cell carcinoma (BCC), Squamous cell carcinomas (SCC), **melanoma**

- a. Which one of these is most common skin cancer – BCC, 80%, grows slowly, superficially
 - b. SCC – 16% of skin cancers, faster growing, has more tendency to invade, can metastasize, can be ulcerated
 - c. Melanoma – 4%, very rapid growth, tend to metastasize early, tends to grow in depth
6. Common symptoms
- a. Lesions – any single area of altered skin. Solitary or multiple. Look for BCC, SCC, melanoma
 - Have you noticed any new growth, lumps, sores?
 - b. Rash and itching (pruritus) – widespread eruption of skin lesions. Is there itching? Does itching precede or follow rash?
 - c. Itching without rash – dry skin, pregnancy, uremia, jaundice, lymphomas and leukemias, drug reactions, thyroid disease
 - d. Skin color changes

If there is skin lesion – describe skin lesions

1. Number – single or multiple
2. Size – measure it with the rules
3. Distribution – how scattered or spread out it is, what body parts are affected, random or patterned, symmetric or asymmetric, confined to sun exposed areas or covered areas
4. Color of the lesions – skin color or other (black, brown, blue, green, yellow, purple, pink, silver, gray, red (blanchable or not))
5. Shape
6. Texture – palpate – is it palpable, smooth, rough, verrucous (warty), fleshy, scaly

Primary skin lesions

1. Screening moles for melanoma use ABCDEFG – asymmetry, border, color, diameter, evolving, elevation, firmness, growing
2. Macule – well circumscribed, flat, non-palpable area of change of skin color < 1 cm (10 mm) in diameter. Freckles, flat moles, port-wine stains, rash of rubella, measles, secondary syphilis, rickettsia infection

3. Patch – well circumscribed, flat, non-palpable area of skin color change > 1 cm in diameter
4. Papule – small, palpable, solid, elevation (raised skin) of the skin < 1cm. Nevi, warts, acne, cancer, seborrheic keratosis, actinic keratosis, measles, rubella, secondary syphilis
5. Plaque – large, flatter, palpable elevation of the skin > 1cm
6. Nodule – a solid elevation of the skin > 1 cm in diameter that extends into deeper skin layers
7. Tumor – a tumor is a solid mass of the skin or subcutaneous tissue, that is firm and usually greater than 2 cm in diameter
8. Pustule – small, circumscribed elevation of the epidermis filled with purulent fluid (pus). Bacterial infection
9. Vesicle – small, circumscribed elevation of the epidermis containing clear liquid < 1 cm in diameter. Herpes infection, acute allergic reactions of contact dermatitis, autoimmune d, small burns
10. Bulla – well circumscribed elevations of the epidermis containing clear liquid > 1 cm in diameter.
11. Wheal – circumscribed raised lesion containing dermal edema. Hives, urticaria.
12. Burrow – tunnels formed in the skin that appears as linear marks – parasite (mites)

Secondary skin lesions

1. Complicates primary skin lesions, or as a result of patients actions
2. Scale – thickened stratum corneum, dry, whitish, silverish
3. Crust – liquid debris (dried pus or blood) – moist, yellowish, brown, golden
4. Fissure (Crack, cleft) – linear cleft through the epidermis that extends into dermis
5. Ulcer – rounded or irregular shaped, deep lesions that results from loss of the epidermis and portion of dermis. Decubitus ulcer (Pressure lesions)
6. Erosion – loss of the part of the epidermis
7. Excoriation (scratch marks) – abrasions produced by mechanical force
8. Atrophy - thinning of the skin
9. Necrosis – death of the skin
10. Scar – new connective tissue formation that replaces lost substance

11. Keloid – overgrowth of the scar

Exanthem – extended uniform rash.

Enanthem – rash localized to mucous membranes

Maculopapular rash – both macular and papules are present (Measles, Secondary syphilis)

Lichenizations - thickening of the skin with accentuated skin markings

Vascular skin lesions

1. Telangiectasia – dilated small blood vessels (capillaries)
2. Petechia – deep red or reddish purple skin lesions 1 to 3 mm in diameter, rounded, flat, no blanching on pressure. Platelet disorders
3. Purpura – larger than petechia
4. Ecchymosis – purple, purplish blue, fading to green yellow and brown with time. Variable in size. No blanching, Bruising, trauma, bleeding disorders.
5. Spider angioma - red, from very small to about 2 cm in diameter, with central body that can be raised and radiating legs (spider). Pressure causes blanching of the spider.
 - a. Face, neck, arms, upper trunk, almost never below the waist
 - b. Normal, pregnancy, liver disease
6. Spider vein – bluish, very small to several inches, and can resemble spider. Pressure does not blanch center, veins can partially blanch
 - a. Legs, near veins, anterior chest
 - b. Varicose veins, IVP (increased vascular pressure)
7. Cherry angioma – bright or ruby red, with age can become purplish, 1-3 mm, round, flat or raised and may be surrounded by pale halo, blanching absent or partial
 - a. Trunk and extremities

Skin colors

1. Pallor – indicates anemia

2. Cyanosis – bluish or purplish discoloration of entire body or part of the body. Low oxygen saturation – there is not enough blood or not enough oxygen. CVS or RS condition.
3. Jaundice – yellow discoloration of the skin and mucous membranes and blood has hyperbilirubinemia. Liver d (hepatitis), Acute cholecystitis, Hemolytic anemia, Hypersplenism
4. Carotenemia - yellow pigmentation of the skin and increased beta carotene in blood
5. Erythema – superficial reddening of the skin
6. Albinism – white due to lack of pigmentation
7. Vitiligo – white/depigmentation of the section of the skin
8. Hyperpigmentation – it is darkening of the skin area due to increased melanin
 - a. Solar lentigines (Soral lentigo, liver spots) – macular hyperpigmentation, well circumscribes lesions on sun exposed surfaces of the skin. Aging spots. Long history of exposure to sun
 - b. Melasma – is a progressive, macular, non-scaling hyper melanosis on sun exposed areas of the skin (face and forearms). Pregnancy, contraceptives, anticonvulsants. 9 times more common in women than men.
 - Melasma presents as symmetrically distributed hyperpigmented macules, which can be confluent, reticulated or punctate. Areas that receive excessive sun exposure, including the cheeks, the upper lip, the chin, and the forehead, are the most common locations; however, melasma can occasionally occur in other sun-exposed locations.
 - Can be called chloasma

Hairs – alopecia (male or female baldness)

Nails

1. Paronychia – a superficial infection of the proximal and lateral nail folds adjacent to the nail plate. The most common infection of the hand (Staph aureus, Strep pyogenes, chronic – Candida). Manicure, nail biting, prolonged water exposure

2. **Clubbing of the fingers** – swelling of the soft tissue of the nail base, with loss of the normal angle between nail and proximal nail fold. Hypoxemia lack innervation. Congenital heart disease, lung cancer, interstitial lung disease, inflammatory bowel disease, malignancies
3. Habit tic deformity – depression of the central nail with Christmas tree pattern. Repetitive trauma. Patient rubbing index finger over thumb or vice versa.
4. Melanonychia – increased pigmentation of the nail that grows out. Rule out Melanoma
5. Onycholysis – separation of the whitened opaque nail plate from the translucent nail bed. Trauma, psoriasis, fungal infections, allergic reactions to nail cosmetics, diabetes, syphilis, peripheral ischemia
6. Onychomycosis – most common cause of nail thickening – *Trichophyton rubrum*
7. **Terry's nails** – nail plate white ground glass appearance, with distal band of reddish brown and obliteration of lunula. Liver disease (cirrhosis), heart failure, diabetes

Diseases and relates skin disorders

1. Addison's disease – hyperpigmentation of oral mucosa and sun exposed skin, in creases of palms and soles
2. Cushing's disease – Striae, atrophy, purpura, ecchymosis, telangiectasia, acne, moon face, buffalo hump, hypertrichosis (excessive hair growth, that is different from hirsutism – male pattern hair growth in female)
3. Gonococcemia – purple to ray macules, papules or hemorrhagic pustules over periarticular surfaces
4. Hypothyroidism – dry, rough, pale skin, coarse and brittle hair, alopecia, myxedema. Skin is cool on touch. Thin and brittle nails.
5. Hyperthyroidism – warm, moist, soft and velvety, thin and fine hair, alopecia, vitiligo, hyperpigmentation
6. Hemorrhagic pancreatitis – bruising and induration over the costovertebral angle (Grey Turner sign), Cullen's sign – bruising around umbilicus

Malignant or not malignant, contagious or not contagious, skin or internal disease

