MODULE: SKIN

OBJECTIVES:

Upon completion of this module, the student will be able to:

1. Describe and differentiate between a primary vs. secondary skin lesion.
2. Discuss the functions of the skin and complications when skin integrity is disturbed.

REQUIRED READINGS:

   Bates’ guide to physical examination and history taking, Chapter 6, The Skin.

PRACTICE:

Equipment needed: Centimeter ruler
MODULE: INTEGUMENTARY

STUDY QUESTIONS:

Define the following terms:

1. macule
2. papule
3. patch
4. plaque
5. nodule
6. tumor
7. wheal
8. vesicle
9. bulla
10. cyst
11. pustule
12. crust
13. scale
14. erosion
15. ulcer
16. keloid
17. fissure
18. excoriation
19. atrophy
20. lichenification
21. annular
22. circinate
23. confluent
24. ecchymosis
25. nevus
26. paronychia
27. petechiae
28. telangiectasia

1. Describe the cardinal symptoms of the integumentary system.

2. Describe the major components of the dermatological history.

3. Differentiate primary vs. secondary skin lesions.

4. Describe the following nail conditions and their significance: clubbing, Beau lines, koilonychia, onycholysis, paronychia, Terry nails, spoon nails, splinter hemorrhages.

5. List the functions of the skin.

6. List the risk factors for skin cancer.

7. Describe the skin changes associated with aging.


9. List the key features of a skin eruption which are always included in a verbal or written description of the rash.
PRIMARY LESIONS

A. macule  a flat spot which is colored differently from surrounding skin. It cannot be felt (not elevated.) Size: up to 1 cm. example: freckle

B. patch  circumscribed, flat, non-palpable area larger than 1 cm. ex: vitiligo

C. papule: a solid raised lesion less than 5 mm in diameter--ex. acne

D. plaque: a solid raised lesion which is larger horizontally than vertically. May or may not be due to coalescence of papules. ex. some birthmarks; strawberry angiomas

E. Nodule: a papule greater than 5 mm in diameter. Usually means set deeper as well. Hint: if skin moves over the nodule, it is in the subcutaneous tissue. If the skin moves with the nodule, it is intradermal. ex. nevus

F. tumor: a nodule > 1-2 cm. diameter

G. Wheal edematous, raised lesion with a definite border. ex. urticaria, hives

H. Vesicle a blister (filled with serous fluid) < 5mm. in diameter. ex. blister from a burn

I. Bulla a blister (filled with serous fluid) greater than 5mm. (blister from burn or impetigo)

J. cyst an encapsulated spherical fluid-filled mass set within the dermis. ex. sebaceous cyst

K. pustule a pus-containing lesion usually less than 5mm diameter--ex. acne

SECONDARY LESIONS

L. Crust dried exudate over damaged skin. ex. scab

M. Scale flakes of epidermis attached to a lesion--ex. dandruff, dry skin

N. Erosion loss of epidermis, non-scarring. ex. the floor of a blister

O. Ulcer loss of epidermis and all or part of dermis--ex. syphilitic chancre, stasis ulcer

P. fissure linear crack in skin into the dermis ex. athlete’s foot

Q. scar fibrotic replacement of the dermis with loss of follicles ex. scar

R. Keloid scar hypertrophied scar

S. excoriation “dug out” skin, usually linear, ex. scratch marks

T. atrophy arterial decrease in portions of epidermis and/or dermis (thinning of skin) ex. aging skin, insufficiency

U. lichenification thickening and roughening of the skin so as to produce accentuation of the normal markings--often due to coalescence of papules
OTHER HELPFUL TERMS IN DERM

1. oozing, weeping--leaking fluid
2. macerated--softened thru decomposition
3. pedunculated--stalked ex. polyp
4. striated--striped
5. sessile-adhering to its base

RASH DESCRIPTION

The (problem, eruption, rash) is (localized, generalized) and (symmetrical, asymmetrical) involving predominantly the:

- scalp
- pressure areas
- face
- forearms
- exposed areas
- palms
- unexposed areas
- dorsum of hands
- trunk
- fingers
- extremities
- legs
- antecubital fossae
- soles

The primary lesion is a (discrete, confluent, grouped, patchy, annular, linear, circular):

- erythematous
- pale
- depigmented
- flesh-colored
- tan/brown
- blue/black
- yellow
- macule, maculopapule, nodule, wheal, tumor, vesicle, bulla, pustule, cyst, patch, plaque

with secondary:

- scales
- erosions
- crusts
- excoriations
- scars/keloid formation
- ulcers
- fissures
- atrophy
- lichenification

Examine the client from 3 or more feet away and determine the general features of the eruption. Then get closer and examine the individual lesions to precisely identify primary and secondary lesions.

OBSERVE

PRIMARY LESION
SECONDARY LESION
COLOR
ARRANGEMENT
DISTRIBUTION

DESCRIBE

DESCRIBING ERUPTIONS

Examine the patient from 3 or more feet away the determine the general features:

1. Note the distribution: localized or generalized. Is it symmetrical: sites of predilection: photo, airborne, clothing, trauma, flexors
2. How is it arranged? discrete, confluent, grouped, patchy? What is the configuration? annular, linear, circular?

Now get closer and examine the individual lesions to precisely identify primary and secondary lesions.
DERMATOLIGIC CHANGES IN AGING

Since 86% of elderly have one or more chronic conditions, there is a tendency to overlook the seemingly less dramatic skin changes. Notable, the skin appears lax because of loss of subcutaneous fat, elastic tissue and collagen. It is generally less elastic, lacks turgor, and is thin or may exhibit marked thickening in some localized areas. Total body water decreases and there is difficulty regulating body temperature to environmental extremes.

Decreased sebaceous and sweat gland activity and reduced water content and patches of rough, fish-like scales may be evident due to hypertrophy of the horny layers. Nails also become more keratinized, resulting in thick, brittle nails with a tendency to peel and become distorted. Scalp hair grays or changes in color, thins out, and becomes less wavy.

General decrease in melanin production gives the face and neck more uniform color of opaque or white. Available melanocytes are unable to distribute themselves uniformly; spotting or clustering of pigmented areas result. Lines of facial expression around the mouth, eyes, and nose are exaggerated by drying and loss of elastic tissue. Mucous membranes in the mouth become thin. Atrophy of the salivary glands contribute to a dry mouth and to halitosis. Small facial vessels become more prominent and vulnerable to trauma. Hormonal changes contribute to chin whiskers in women.

Genitalia show age-related changes: sparse pubic hair and reduction in the size of genitals; vaginal outlet decreases. The rugae and mucose of the vagina appear smooth, dry, and glistening. There is increased friability.

These are normal, physiologic changes of aging. However, it is important to remember also that the incidence of skin disease increases steadily with age from 54 on.

<table>
<thead>
<tr>
<th>Subjective complaints</th>
<th>Objective findings</th>
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<tbody>
<tr>
<td>1. dry, itching skin</td>
<td>1. scaling dry skin</td>
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<tr>
<td>2. presence of ‘scars’</td>
<td>2. decreased skin turgor &amp; elasticity</td>
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<tr>
<td>3. increased bruising tendency</td>
<td>3. purpuric lesions</td>
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<td>4. wrinkling of skin</td>
<td>4. flat, hyperpigmented areas</td>
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<td>5. brown spots on the skin on hands</td>
<td>5. prominent tendons, veins &amp; knuckles</td>
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<td>6. pale skin</td>
<td>6. decreased body hair/shiny skin--increase hair in nose and ears</td>
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<td>7. loss of body hair</td>
<td>7. pallor (especially facial)</td>
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<td>8. diminished perspiration</td>
<td>8. prominent bluish discoloration of mucous membranes (venous)</td>
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<td>9. splitting nails</td>
<td>9. thick, brittle nails, with striated longitudinal ridges</td>
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<tr>
<td>10. intolerance to cold &amp; hot environments</td>
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*The following are a list of non-pathological skin changes which are frequently found on P.E. of the elderly. As with any changes, other causes should be ruled out before determining that they are a normal part of the aging process,

<table>
<thead>
<tr>
<th>Condition</th>
<th>Cause</th>
<th>Description</th>
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<tbody>
<tr>
<td>Lentigines</td>
<td>Uniform distribution of melanocytes</td>
<td>Usually found in exposed areas. Sharply demarcated hyperpigmented areas which are macular, round and circumscribed. More in men/dry flaking skin with diminished turgor itch/scratch cycle results in excoriated areas and may result in possible secondary infection.</td>
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<tr>
<td>Senile Pruritis</td>
<td>Masting of epithelium and dermal appendages results in decreased oiliness and in dehydration</td>
<td>White macular areas with tendril-like projections spreading from the main body</td>
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<tr>
<td>Pseudoscars</td>
<td>Due to repair of tears in thinned dermis</td>
<td>Spider-shaped linear, flat blue lesions usually found on legs. They fill from the periphery with pressure</td>
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<tr>
<td>Venous stars</td>
<td>Due to increased pressure in superficial veins as result of collagen &amp; elastin changes</td>
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