

Clinical Medicine I Dermatology Objectives

Introduction to Dermatology

1. Given a slide of a skin lesion, the student will correctly characterize that lesion according to the following terms:
 - border/surrounding skin
 - color
 - distribution
 - pattern
 - shape
2. The student will be able to define basic dermatologic terms, including primary and secondary lesions, patterns of distribution, and identify distinguishing characteristics of dermatological conditions.
3. The student will be able to obtain a history of a patient with a rash to determine:
 - the initial appearance (when, where, type of lesion)
 - the initial symptoms
 - subsequent symptoms and appearance
 - medications/ingestions
 - allergies
 - contacts
 - PMH of rash; similar signs and symptoms
 - Family history (FH)
 - Social history and environmental changes

Dermatologic Diagnostic Procedures (Lab)

1. Given a patient presenting with a dermatologic complaint the student will:
 - use dermatologic history questions to gain clues to the diagnosis
 - use physical exam clues of distribution as well as primary, secondary and distinguishing features to formulate a differential diagnosis
 - know the indications for:
 - KOH (potassium hydroxide)
 - fungal culture
 - scabies test
 - Tzanck smear
 - Wood's lamp
 - cryosurgery
 - curettage and electrodesiccation
 - biopsy and excision
 - incision and drainage
2. The student will recognize how the above listed tests are used to:
 - confirm a suspected diagnosis
 - differentiate between 2 diagnoses
 - provide definitive treatment for various dermatologic disorders

Eczema and Glandular Diseases

1. Given a patient with/slide of an epidermal rash, the student will use H&P to distinguish between the following lesions:
 - atopic dermatitis
 - contact dermatitis
 - dyshidrotic eczema
 - lichen simplex chronicus
 - nummular eczema
 - perioral dermatitis
 - seborrheic dermatitis
2. Given a patient with acne lesions, the student will:
 - characterize the lesions as open or closed comedones, papules, pustules, nodules or cysts
 - distinguish between acne and rosacea
3. Given a patient with/slide of the following glandular conditions, the student will use H&P to distinguish between:
 - hidradenitis suppurativa
 - hyperhidrosis
 - miliaria
4. For each of the above listed conditions (eczema and glandular disease), the student will be able to give the definition of the condition and describe the etiology, predisposing conditions, clinical features, and how the diagnosis is established.
5. The student will identify the most commonly used medications/first line therapy and patient education components for eczema and glandular diseases.

Nail Disease

1. The student will be able to define each of the following nail diseases and describe the etiology, clinical features, and how the diagnosis is established.
 - ingrown nail
 - onycholysis
 - onychomycosis
 - paronychia
 - tinea unguium
 - subungual hematoma
2. The student will identify the most commonly used medications/first line therapy and patient education components for each of the above nail diseases.
3. The student will recognize the significance of underlying medical conditions revealing themselves via physical exam findings of the nail, such as with:
 - clubbing of the nail
 - pigmentation of the nails
 - pitting of the nail
 - pincer nails
 - splinter hemorrhages
 - tumors of the nails
(warts, granuloma, nevi, melanoma, and digital mucous cysts)

Insects and Infestations

1. Given a patient with an acute dermatologic eruption, the student will use H&P to distinguish between classic examples of the following:

- erythema migrans (Lyme Disease)
 - pediculosis
 - capitis
 - corporis
 - pubis
 - scabies
 - spider bites (Black Widow, Brown Recluse)
2. The student will be able to define each of the above conditions related to insect bites and infestations and describe the etiology, transmission, clinical features, and how the diagnosis is established.
 2. Given a patient with lesions listed above, the student will recognize the most commonly used medications/first line therapy and patient education strategies.
 4. The student will be able to describe the history and physical information to gather, clinical features, treatment, potential complications, and patient education components regarding animal bites.

Dermatologic Infections (Bacterial, Viral, Fungal)

1. Given a patient with an acute dermatologic eruption, the student will use H&P to distinguish between classic examples of the following:
 - Bacterial
 - cellulitis
 - erysipelas
 - impetigo
 - toxic shock syndrome
 - Viral
 - erythema infectiosum
 - hand/foot/mouth disease
 - herpes simplex
 - herpes zoster
 - molluscum contagiosum
 - roseola
 - rubella
 - rubeola
 - varicella (chicken pox)
 - warts (HPV)
 - Fungal
 - candidiasis
 - candidal balanitis
 - candida intertrigo
 - oral candidiasis
 - angular cheilitis
 - pityriasis versicolor
 - tinea
 - capitis
 - corporis
 - cruris
 - manus

- pedis
 - kerion
2. The student will be able to define the bacterial, viral, and fungal dermatological conditions listed above and describe the pathophysiology, etiology, transmission, clinical features and how diagnosis is established.
 3. Given a patient with any of the lesions listed above, the student will recognize the most commonly used medications/first line therapy and describe patient education strategies for treatment and prevention where appropriate.

Wounds and Repair (Lecture and Lab)

1. The student will be able to describe each of the following as it relates to wounds and wound repair.
 - intentional vs. accidental
 - clean vs. contaminated
 - age of wound
 - depth
 - area
 - stages of wound healing

 - factors which interfere with and promote wound healing:
 - stasis dermatitis
 - ulcer location
 - chronic medical conditions

 - types of anesthesia used in wound repair and the appropriate injection procedure:
 - infiltration
 - digital

 - elements of preparing a wound for repair:
 - exam
 - cleansing
 - debridement
2. The student will be able to discuss after care, suture removal, and patient education regarding wounds and wound care.
3. The student will be able to describe complications of wound repair and healing.
4. The student will be able to describe the characteristics of wound closure material including:
 - absorbable suture
 - nylon
 - silk
 - prolene
 - steri-strips
 - staples
 - adhesives
5. The student will be able to describe and perform appropriate suturing techniques including:
 - simple interrupted
 - running

- horizontal and vertical mattress
 - subcuticular
 - identify wounds for which the above sutures are recommended
6. The student will be able to describe the management of the following wounds:
- flap
 - scalp
 - forehead
 - eyebrow and lid
 - nose
 - lips
 - oral cavity
 - joint
 - hand
 - bites
 - foreign bodies
 - wounds through shoes

Benign and Malignant Lesions

1. Given a patient/slide of a pigmented lesion, the student will distinguish through history and physical exam:
 - Benign/ Congenital
 - acrochordon (skin tag)
 - actinic keratosis
 - café au 'lait spot
 - cherry angioma
 - dermatofibroma
 - epidermal/sebaceous cyst
 - hemangioma
 - keloids
 - keratoacanthoma
 - mongolian spot
 - neurofibroma
 - nevus
 - seborrheic keratosis
 - solar lentigo
 - venous lake
 - Malignant
 - basal cell carcinoma
 - malignant melanoma
 - squamous cell carcinoma
2. The student will discuss the warning signs for malignant melanoma (ABCDE).
3. Given a patient/case with concerns about a lesion, the student will be able to describe the process through history and physical exam to:
 - identify the most common types of skin cancer
 - distinguish between a suspicious and a benign lesion
4. Given an example of a lesion requiring biopsy, the student will choose between punch biopsy, elliptical excision or Moh's procedure for diagnosis and/or treatment.

5. The student will be able to identify conditions and lesions requiring referral.

Follicular Disease

1. The student will be able to define the following conditions and describe the etiology, pathophysiology, clinical features, and how diagnosis is established for each of these conditions.
 - various forms of alopecia
 - androgenic
 - areata
 - telogen effluvium
 - traumatic
 - follicular diseases
 - folliculitis
 - furuncle/carbuncle
 - hirsutism
 - hypertrichosis
 - pseudofolliculitis

Papulosquamous and Inflammatory Diseases

1. Given a patient with/slide of an epidermal rash, the student will use H&P to distinguish between the following lesions:
 - drug eruptions (Stevens-Johnson Syndrome, Toxic Epidermal Necrolysis (TEN), Erythema Multiform (EM))
 - erythema nodosum
 - granuloma annulare
 - keratosis pilaris
 - lichen planus
 - psoriasis
 - pityriasis rosea
 - urticaria
 - angioedema
 - xerosis/ichthyosis vulgaris
2. For the above listed conditions, the student will be able to define the condition and describe the etiology, pathophysiology, predisposing conditions, clinical features and how diagnosis is established.
3. For the above listed conditions, the student will be able to identify the most commonly used medications/first line therapy and patient education strategies.
4. The student will be able to identify emergent conditions and lesions requiring referral.

Burns, Sun Reactions, and Cold Exposures

1. The student will be able to classify and describe the characteristics and pathology of epidermal, partial thickness, and full thickness burns including estimation of percent burned body surface area (BSA).
2. The student will be able to describe initial management of the burn patient and emergent conditions requiring hospital admission and referral.

3. The student will be able to recognize common medications/first line therapies and ongoing treatment options of burns and common complications with regard to the following:
 - Infection control
 - Debridement
 - Grafting
 - Pain management
 - Electrolyte balance
 - Contractures/scarring
 - Sepsis/Organ failure
4. The student will be able to describe the etiology, pathophysiology, presenting characteristics, differential diagnosis, and treatment of severe sun burns, acute sun reactions, and systemic and drug-induced photosensitivity.
5. With regard to cold exposure, the student will be able to:
 - identify risk factors for cold injury
 - describe the pathology of tissue reaction to cold
 - describe appropriate physical exam and ancillary studies in frostbite
 - describe effective methods for re-warming
 - describe complications of frostbite and prognosis
 - identify patients with hypothermia and emergent conditions requiring hospitalization and referral

Selected Sexually Transmitted Infections

Given a patient at risk for a sexually transmitted disease the student will:

1. Recognize the following lesions:
 - chancroid
 - condyloma cuminata
 - herpes simplex
 - syphilis
2. Define each of the above conditions, identify the causative agent, mode of transmission, clinical features, and how diagnosis is established.
3. Recognize the most commonly used medications/first line therapy and describe patient education strategies, including prevention or disease transmission.

Introduction to Laboratory Medicine

During the Dermatology Unit, the student will be introduced to the basics of ordering and interpreting common laboratory studies. The studies being introduced are a list of common labs. This list does not represent all of the studies the student will be responsible for learning during the academic phase.

1. The student will be able to:
 - Differentiate between specificity and sensitivity
 - Determine how reference ranges (normal values) for laboratory studies are determined
 - Identify factors that might contribute to false negative or false positive values.
2. Discuss criteria for deciding when labs are indicated and when they are not.
3. Recognize the importance of correlating underlying pathophysiology and clinical findings when ordering diagnostic tests and interpreting lab values. *(This lecture is an introductory lecture. All of the labs discussed will be taught in more depth in other units of clinical medicine and other labs/diagnostics specific to individual diseases/conditions will be introduced.)*
4. Recognize each of the following in terms of what each lab is measuring and recognize common conditions where these laboratory tests may be useful in diagnosing and monitoring the patient.
 - Urinalysis
 - Microbiology (blood, urine, sputum cultures)
 - Hematology
 - CBC
(At this point the student should be able to recognize the normal ranges for each component of the CBC, and identify common conditions that would result in an elevated or suppressed value.)
 - Differential
(At this point the student should be able to identify the use of the differential in distinguishing between viral and bacterial illness.)
 - Coagulation Tests
 - PT, PTT, INR
 - Electrolytes
 - Sodium, Chloride, Potassium
 - Chemistry Studies
 - Calcium Magnesium
 - Glucose Phosphorus
 - BUN
 - Creatinine
 - Uric Acid

 - Serum Amylase
 - Serum Lipase
 - Liver Function Tests
 - ALT (alanine aminotransferase)
 - AST (aspartate aminotransferase)
 - Bilirubin
 - Ammonia

 - Thyroid Function Tests
 - TSH (thyroid stimulating hormone)
 - T3 (triiodotyronine)