LESSON ASSIGNMENT

LESSON 4

Common Skin Diseases.

LESSON ASSIGNMENT

Paragraphs 4-1 through 4-6.

LESSON OBJECTIVES

After completing this lesson, you should be able to:

4-1. Identify the skin diseases pertaining to common dermatoses and their treatment.

4-2. Identify the diseases pertaining to viral infections and their treatment.

4-3. Identify bacterial infections of the skin and their treatment.

4-4. Identify fungal infections of the skin and their treatment.

4-5. Identify disturbances of hair growth and their treatment.

SUGGESTION

After completing the assignment, complete the exercises at the end of this lesson. These exercises will help you to achieve the lesson objectives.
LESSON 4
COMMON SKIN DISEASES

4-1. INTRODUCTION

Skin conditions are very common. They are a constant concern for the patient and the medic. Usually, more than one-third of the overall sick call load is related to skin conditions. The single most contributing factor to skin diseases is poor personal hygiene. Educating the troops is the best preventive measure for skin diseases. As you read this lesson, remember that the soldiers in your unit will depend on your expertise for the prevention and treatment of skin conditions. Also, remember the adage, "If it is wet, use a wet dressing, and if it is dry, use a salve." This saying is true for the majority of skin diseases.

4-2. SKIN DISEASES PERTAINING TO COMMON DERMATOSES

a. Eczema.

(1) Definition/characteristics. Eczema is the general name for a group of noncontagious inflammatory skin diseases. These diseases have a tendency toward erythema (redness of the skin), swelling edema (presence of abnormally large amounts of fluid in the intercellular tissue spaces), vesiculation (small bladder or sac containing fluid), oozing, weeping, and crusting with itching. Eczematous dermatoses are those skin diseases where changes seen in eczema are apparent. Nummular eczema are round, coin-shaped lesions. These lesions are most commonly found on extremities near or on surfaces where muscles extend joints, shoulders, and buttocks. The cause of nummular eczema is not known. It is proven that winter, bathing, and soaps aggravate this skin condition. Hand eczema has the characteristics of scaling, crusting, and fissuring (grooving). The dorsa (back) of the hands is a common location. A common cause of hand eczema is prolonged contact with soaps and detergents. Ear eczema (otitis externa) is usually found on the external auditory canal, and seborrheic dermatitis (dry, moist, or greasy scaling) is normally found in the same area.

(2) Treatment. To treat eczema, you should apply cold, wet compresses and antipruritic medications (agents that relieve itching, burning, and pain). Air dry the area and use bland dusting powders. Apply topical antibiotics for secondary infections. If neomycin is used, be aware that the patient may become sensitive to the drug (experience excessive skin reactions) and use of the drug may need to be discontinued. Another medication that can be applied topically is a steroid cream (with hydrocortisone one percent). Refer all cases that are chronic or acute and unresponsive to conservative topical therapy to a medical doctor. Treat all underlying diseases, if present.
b. **Contact Dermatitis.**

(1) **Definition/characteristics.** Contact dermatitis is an acute or chronic inflammation often sharply marked. This abnormality is produced by substances coming into contact with the skin. People most susceptible are blondes, redheads, and light-skinned individuals. Contact dermatitis is a toxic, allergic, photoallergic (reaction-increased-by-light) condition, and may or may not be limited to the point of contact. Contact dermatitis can be caused by touching these common items: plants (poison ivy, oak, sumac), chemicals, cosmetics, fabrics, and such household items as detergents, waxes, and polish. The effects of touching any of these substances may be immediate or delayed according to how sensitive a person is to the particular substance. The skin area that the offending substance has touched will be itching and red and will have burning blisters. In later stages, oozing or crusty areas are common.

(2) **Treatment.** No treatment is effective unless the offending agent is removed. Use cool soaks. Apply bland compresses and a drying corticosteroid medication during the period when skin lesions are acute. Be careful not to use hydrocortisone medication for a long period; this drug can cause disabling conditions.

c. **Psoriasis.**

(1) **Definition/characteristics.** Psoriasis is a common skin disease caused by gene combination. Skin lesions are discrete- pink or dull-red. Patches of thick skin with a red base and white-silvery scales or flakes are present. Psoriasis usually occurs at the elbows, knees, scalp, back, or penis. The condition is worse if the area is exposed to sunshine too long; however, a small amount of sunlight is helpful.

(2) **Treatment.** There is no known cure for psoriasis, but the following treatment can be administered to provide temporary relief. Apply hydrocortisone cream (one to two percent) four times daily. Mild sunlight and a warm climate have a favorable effect, but humidity makes the condition worse. Kenalog® spray and vitamin E are also helpful.

d. **Acne.**

(1) **Definition/characteristics.** Acne is a chronic inflammatory disease of the sebaceous glands and hair follicles. It is caused by excessive oils due to hormone stimulations, bacteria, and family history. Commonly affected areas are the face, back, and chest. Skin lesions are multiple spreading pimples, cysts, and painful nodules. In many cases, pus develops.

(2) **Treatment.** There are pros and cons about a number of foods contributing to acne. Since acne is usually chronic for a number of years (ranging from 1 to 15), certain foods may be eliminated from the diet. Eliminate one or two foods for not less than three weeks and notice whether the skin condition has improved.
Generally, chocolate, nuts, and carbonated cola beverages should be eliminated from the diet. Additionally, give the patient vitamin A for a 3-month period with a 1-month interruption to avoid hypervitaminosis (an excess of the vitamin). Also, apply drying lotions such as white lotion or commercially prepared lotions containing sulfur and resorcinol. DO NOT USE greasy ointments. In some cases, applying a corticosteroid lotion is valuable. Tetracycline is the most beneficial antibiotic, but it must be monitored carefully. Taking oral contraceptives are said to help some young women with acne.

e. Pityriasis Rosea.

(1) **Definition/characteristics.** This is a skin disease that is characterized by granular scales. The disease is noncontagious and is seen most frequently in young adults. The number of cases of this skin disease is highest during spring and fall in temperate climates. The skin lesions are red, oval, scaly patches on the neck and elbow. Spontaneous remission of the disease usually occurs in six weeks, but the skin eruptions may last two months or more.

(2) **Treatment.** Obtaining a suntan helps the patient's appearance but does not help the disease. Cool baths and application of oatmeal and caladryl lotion help reduce itching.

f. Sebaceous Cysts.

(1) **Definition/characteristics.** Sebaceous cysts are round, globular, cutaneous (skin) or subcutaneous (under the skin) tumors. These tumors rise from the sebaceous glands, usually on the face, neck, scalp, back, and genitalia. The cysts are caused when a gland closes off. When the gland closes, small, hard nodules (cysts) form at the hair follicles.

(2) **Treatment.** There is usually no treatment unless the cysts are large, annoying, or infected. In such cases, follow this procedure: Remove the cyst surgically including the epithelial wall so that the cyst will not reform. Administer antibiotics to treat the infection.

g. Seborrheic Dermatitis.

(1) **Definition/characteristics.** Seborrheic dermatitis is an acute or chronic papulosquamous dermatitis (scaly dandruff) with or without redness of the skin. It usually affects the scalp, face, the area of the sternum, interscapular (shoulder blade) area, umbilicus, and body folds. Genetic factors as well as climate seem to affect the number of cases of this disease. Stress, hormones, nutrition, and infection cause the disease to become more severe. Seborrheic dermatitis is associated with overactive sebaceous (oil) glands of the skin. This skin condition is usually apparent as dry or oily scaling of the skin or scalp sometimes accompanied by itching. Redness, fissuring, and secondary infection may be present, and the affected area may become acutely inflamed and weeping. Intertriginous dermatitis, lesions in the skin folds, may develop.
Typically, lesions are yellowish, greasy scales or flakes that resemble potato chips. This condition tends to be recurring and last throughout the patient's life. Individual outbreaks of the disease may last weeks, months, or years. Seborrheic dermatitis is frequently found closely associated with common acne. Both skin conditions should be treated at the same time.

2. **Treatment.** The patient should eat a well balanced diet, restricting excess sweets, spices, hot drinks, and alcoholic beverages. Urge him to maintain regular working hours, get adequate sleep and recreation, and observe standards of simple cleanliness. Living in this manner should relieve such factors as infections, overwork, stress, constipation, and dietary abnormalities—all of which cause the disease to worsen. Steroids, creams or lotions, may be applied to the skin lesions.

**CAUTION:** Potent fluorinated corticosteroids used regularly on the face, however, may produce steroid rosacea (superficial inflammation resembling acne). Selsun®, Fostex®, and Sebulex® may be used to treat seborrheic dermatitis of the scalp. Do not overuse Selsun because it can cause baldness. If seborrheic dermatitis in the skin folds is being treated, apply astringent wet dressings followed by three percent vioform and one percent hydrocortisone base.

h. **Urticaria (Hives).**

1. **Description/characteristics.** Urticaria is an acute or chronic inflammatory skin reaction of an allergic origin with eruptions of evanescent (unstable) wheals or hives. Hives are caused by ingesting food or drugs. An acute case lasts less than six weeks. A chronic case lasts longer than six weeks. Common causes of hives include eating shellfish, strawberries, eggs, and chocolate as well as using penicillin medications or serum vaccines.

2. **Treatment.** Avoid re-exposure to sensitizing drugs or foods and look for the drugs and foods that caused the hives. Eliminate these drugs and foods. Give epinephrine 1:1000 in the dosage 0.3-1.0 ml sc if laryngeal spasm is suspected. Administer antihistamines for prompt and sustained relief of symptoms.

i. **Nevi (Mole).**

1. **Description/characteristics.** A nevi is a congenital, discolored spot which is elevated above the surface of the skin. The cause of these skin lesions is unknown. Nevi are dome-shaped, flat, or elevated papules with brown or black colored flesh. They are often hairy and appear on any part of the body. Nevi usually appear during childhood, usually on the palms, soles, and genitalia. They may be the precursor to malignant melanoma.

2. **Treatment.** All suspicious lesions of this type should be examined by a dermatologist for surgical removal and biopsy.
j. **Keloid.**

(1) **Description/characteristics.** A keloid is a mass of fibrous tissue overgrowth at the site of a burn or skin wound. These growths occur more frequently in Blacks. A keloid is a firm, elevated, whitish or reddish elastic nodule of scar tissue. It is common for keloids to have crab-like projections. Their surface is smooth, glistening, and hairless.

(2) **Treatment.** Keloids are treated by surgical removal, x-rays, and intrallesional corticosteroid and hyaluronidase injections.

k. **Basal Cell Cancer Lesions.**

(1) **Description/characteristics.** These skin lesions are single or multiple, elevated, waxy nodules with pearly, rooted borders. In the later stages, the lesions may become ulcerous. These lesions are most frequently found on areas of the body which are exposed to the sun: the scalp, face, neck, and ears.

(2) **Treatment.** Basal cell cancer lesions can be treated by removing them surgically or by x-ray therapy. Fair-skinned people can prevent these lesions from forming by wearing sunscreen lotions.

l. **Malignant Melanomas.**

(1) **Description/characteristics.** Malignant melanomas are highly malignant tumors of the skin or mucous membranes. These tumors may metastasize (transfer) to any organ of the body. They occur more frequently in women, fair complexioned individuals, and people between the ages of thirty and sixty. Incidence is increased with great ultraviolet light exposure. The lesions are usually brown, pink, black, or purple nodules ("red, white, and blue"). These tumors are sometimes flat.

(2) **Treatment.** Malignant melanomas may be removed surgically or exposed to chemotherapy or immunotherapy.

m. **Drug Eruptions.**

(1) **Description/characteristics.** Skin lesions can be caused by drugs. The skin eruptions are usually small, red maculae, papules, vesicles, or wheals. The onset is sudden, and itching may be severe. The lesions are generally widespread and symmetric in distribution. Almost any systemically administered medication may produce a skin eruption: penicillin, antibiotics, salicylates, and barbiturates.

(2) **Treatment.** Follow this treatment for drug eruptions. Find the cause. Which drug caused the skin eruptions? Discontinue the medication. Administer antihistamines; they may be helpful. For severe cases, administer corticosteroid therapy.
4-3. SKIN DISEASES PERTAINING TO VIRAL INFECTIONS

a. Herpes Simplex (Fever Blister).

(1) Description/characteristics. Herpes simplex is a recurrent acute viral infection characterized by the appearance on the skin or mucous membranes of single or multiple clusters of small vesicles. These vesicles are filled with clear fluid, and the vesicle base is slightly raised. The infectious agent is a relatively large virus which frequently accompanies febrile (fever causing) illnesses: colds, cases of overexposure, exhaustion, nervous tension, and menstruation. Herpes simplex is a benign disease and occurs in almost everyone at one time or another. It may appear anywhere on the skin or mucous membranes, but it most commonly appears on the face (especially around the mouth), conjunctiva, cornea, or genitals. At times, there is an associated stomatitis (inflammation of the mucous membrane of the mouth). Vesicles usually appear after a period of tingling discomfort or itching. The principle symptoms are burning and stinging. Neuralgia may precede and accompany attacks. Single vesicles or small groups may come together to form large lesions. The vesicles usually persist for a few days. Then, they begin to dry and form a yellow crust. Vesicles on the nose, ears, or fingers may be painful. Self-limiting healing usually occurs within seven to ten days. Vesicles usually recur in the same areas. The time between episodes varies from weeks to months. Do not confuse herpes simplex with herpes zoster or impetigo. Examine lesions in the genital area carefully to be sure the lesion diagnosed as herpes simplex is not syphilis, lymphogranuloma venereum (LGV), or chancroid.

(2) Treatment. There is no specific medication for herpes simplex, but there is a course of treatment to follow. Apply topical lotions. Drying lotions and liquids help; however, moisture aggravates the condition and delays healing. Treat stomatitis, if it occurs, with mild saline mouthwashes. Medications which can be applied to the skin lesion include vioform three percent; tincture of benzoïn, ten percent spirits of camphor, and the commercial product Campho-Phenique®. To abort lesions, apply a moistened styptic pencil several times daily. For herpes of the eye, DO NOT use corticosteroids, systemic or local. Costicosteroids may cause the problem to progress to dendritic ulcer of the cornea (cornea ulcer that spreads in all directions).

b. Herpes Zoster (Shingles).

(1) Description/characteristics. These skin lesions are an infection of the central nervous system primarily involving the dorsal root ganglia (a collection of nerve cell bodies on the dorsal root of each spinal nerve). The lesions are characterized by a blister and pain in the affected areas. Shingles is most common after the age of fifty. With rare exceptions, one attack of zoster gives a person lifelong immunity. Early symptoms include chills, fever, malaise, and gastrointestinal disturbances. These symptoms may be present from three to five days before the skin lesions appear. Pain usually precedes the appearance of skin lesions by about 48 hours or more. Severe pain and burning are common but may not be present.
Treatment. No specific therapy is known; however, the following treatment may help the condition. Give barbiturates to help control tension and nervousness associated with neuralgia. Apply soothing powders or lotions to the skin lesions. Calamine lotion may be applied liberally and covered with a protective layer of cotton. An analgesic or codeine may be given for pain.

c. Verrucae (Warts).

(1) Description/characteristics. These are common contagious, benign epithelial tumors that are classified by either shape or location. No age group is immune to these tumors. They are most frequently seen in children and young adults. Usually, there are no signs or symptoms.

(2) Treatment. Warts can be easily removed, but they often recur at the same or a different site. It is often better to leave a single inconspicuous wart alone. These treatment techniques can be followed. Apply trichloroacetic acid to the wart every three to four days. When the wart whitens, apply phenol neutralized by alcohol. Nitric acid and silver nitrate may also be applied to the wart. In some moist anogenital warts, applying 25 percent podophyllum resin in benzoin tincture at weekly intervals is effective. Cryotherapy is used. Chemosurgery (destruction of tissue through the use of chemicals) is sometimes performed. The wart can be removed surgically. Electric desiccation (drying up) of the wart is sometimes performed.

4-4. BACTERIAL INFECTIONS OF THE SKIN

a. Impetigo.

(1) Description/characteristics. Impetigo is an inflammation of skin marked by isolated pustules. These skin lesions become crusted and ruptured. The causes of impetigo include minor skin injuries such as scratches, insect bites, mosquito bites, etc., which become infected with staphylococcal or streptococcal (group AB–hemolytic) infections. Initial lesions have vesicles, bullae, and pustules on the face and extremities. The lesions rupture, becoming red erosions. Ecthyma (ulcerated impetigo) is usually present. Impetigo is very contagious and often found in infants and young children. The organism staphylococcus is the most common cause of impetigo, but streptococcus occasionally causes the disease.

(2) Treatment. Begin by washing the affected area with soap and water three times a day. Scrub gently to remove crusts. Administer erythromycin 250 mg by mouth four times a day for 10 days.

b. Furuncle (Boil)

(1) Description/characteristics. A furuncle or boil is an inflammation of subcutaneous layers of skin gland or hair follicle. Causes include chronic diseases, staphylococcal organisms, or trauma to the skin such as shaving or squeezing. The
nODULES  

nodules are hot, tender, red, and hard. They may break down to form a necrotic core that has a pus-filled center and pus point. A boil starts with a hair follicle and occurs especially at the neck, axilla, and buttock. They are painful because of pressure being put on nerve endings, particularly in areas where there is little room for swelling of underlying structures.

(2)  Treatment. DO NOT squeeze lesions near the nose. Treat these and other boils in this way. Administer penicillin VK by mouth four times daily for 10 days. Apply warm soaks to make the boil form a head. Make an incision and drain the boil.

c.  Carbuncle.

(1) Description/characteristics. A carbuncle is an abscess of skin and deeper tissues—an extension of a furuncle invading multiple follicles. Carbuncles are caused by staphylococcal infections. Deeper than a furuncle and usually located on the lower neck and upper back, carbuncles heal slowly and leave a large scar. Signs and symptoms include the following:

(a) Possible fever.

(b) Two or more cores to one lesion.

(c) Multiple drainage points.

(d) Deep suppuration (production and discharge of pus).

(e) Extensive local sloughing.

(f) Multiple draining abscesses.

(2) Treatment. Apply hot compresses. Then perform an incision and allow the lesion to drain. Apply an antibiotic topically to the lesion or have the patient take an oral antibiotic. Consult a physician if the patient is resistant to conservative local antibiotic therapy.

d.  Cellulitis.

(1) Description/characteristics. Cellulitis is an acute or chronic infection of the skin caused by complication of a wound, ulcer, or impetigo. Invasion of normal skin is possible, especially on the feet and lower legs. Cellulitis is usually caused by streptococcal bacteria, but rarely caused by staphylococcus bacteria. The affected area becomes warm, red, and tender. When pressure is applied to the skin, there is pitting edema in various places around the affected area. Later, blisters with pus form. If the affected area is large, the patient's entire body reacts. The lower extremities are often involved. Recurrent attacks of cellulitis may sometimes affect the lymphatic vessels and produce permanent swelling called "solid edema."
Treatment. To treat cellulitis, give oral antibiotics; for example, penicillin VK. Elevate the affected area, if possible, and give warm soaks. If cellulitis is severe, recommend bedrest. Continue treatment until signs of the infection are absent for four to five days.

e. Miliaria (Heat Rash).

(1) Description/characteristics. Heat rash is an acute inflammation of the sweat glands. The rash occurs when the free flow of sweat from the pores is obstructed. Heat rash is most common during hot weather or when an individual is working in areas where the environmental temperature is unusually high with humidity. The skin lesions are numerous and profuse, but they are usually confined to the covered areas of the body because these areas are where the temperature is the hottest. Three types of lesions are usually present; all are pinhead size. The vesicles are usually clear with red papules and very small pustules. Itching may be present.

(2) Treatment. Keep the patient cool and advise him to take cool, not hot, showers. The patient should wear light clothing and use talcum powder or cornstarch generously over the affected areas. DO NOT cover the area with ointments because they trap sweat causing the heat rash to become worse.

f. Paronychia.

(1) Description/characteristics. Paronychia is an inflammation of the skin around the nail. In acute cases, the causative organism is usually micrococi, Pseudomonas, or Proteus and sometimes Candida. The organism enters through a break in the skin; for example, hangnail or break caused by manicuring. Infections may follow the nail margin or may extend beneath the nail, and pus may form.

(2) Treatment. Do not apply hot compresses or soak acute cases that are infected. For bacterial infections, administer an appropriate systemic antibiotic. If the skin lesion has a pus-filled pocket, open the lesion carefully using the point of a scalpel.

g. Folliculitis.

(1) Description/characteristics. Folliculitis is an inflammation of the hair follicles caused by staphylococcal infection. Sycosis (barbare vulgaris) is a chronic, hard to manage type also known as pseudofolliculitis or barber's itch. This type of folliculitis is a deep-seated lesion. It is caused by trauma such as shaving and autoinoculation. The skin lesions will burn and itch slightly, and pain will occur on the manipulation of hair. In sycosis, the surrounding skin becomes involved also; therefore, the lesions look much like a form of impetigo or eczema with redness and crusting.

(2) Treatment. Treatment should include using good personal hygiene and keeping the affected area clean. Medications that can be applied to the affected area include iodochlorhydroxquin three percent in cream or ointment form, applied locally...
twice a day, as well as an antibiotic such as polymyxin B in combination with bacitracin or oxytetracycline. The protocol of treatment facility for folliculitis or pseudofolliculitis should be followed.

4-5. FUNGAL INFECTIONS OF THE SKIN

a. Tinea Capitis (Scalp Ringworm).

(1) **Description/characteristics.** Tinea capitis is ringworm of the scalp. It is practically never seen in adults. There are usually no symptoms except itching. Lesions, undetectable to the naked eye, are small, grayish patches in which hairs are broken, scant, and lusterless.

(2) **Treatment.** Skin lesions can be treated effectively with microcrystalline griseofulvin until the skin is clear. It is no longer necessary to shave the patient's head. Advise the patient to use Kwell® shampoo and to take griseofulvin orally.

b. Tinea Corporis or Tinea Circinata (Ringworm of the Body).

(1) **Description/characteristics.** All species of dermatophytes (fungus capable of causing skin disease) may cause body ringworm, but some fungi are more common than others. Skin lesions can appear on the trunk, face, upper extremities, and in skin folds. Exposed skin areas are the most common place for lesions. The lesions are uncommon in temperate climates. The lesions have raised borders that spread from the outside and clear in the middle of the lesion. They must be distinguished from dermatoses such as pityriasis rosea, seborrheic dermatitis, annular psoriasis, and so forth. Intensive itching helps distinguish these lesions as tinea corporis/circinata.

(2) **Treatment.** These skin lesions can be effectively treated with griseofulvin if the lesions are severe, but you should check first with the medical officer. Vioform® three percent may be used, and tolnaftate is effective. Miconazole (Micatin®) 2 percent cream (Rx 38) is the most effective topical antitineal agent currently available in the United States.

c. Tinea Cruris (Jockstrap Itch).

(1) **Description/characteristics.** Tinea cruris may be caused by a variety of ringworm organisms and is very similar to tinea corporis. It is complicated by miliaria (skin eruption caused by sweat in the glands), secondary bacterial or candidal infection, and reaction to treatment. Both sides of the upper thighs may be affected, but eruption is usually asymmetrical (not identical on both sides of a central line). Typical lesions are usually confined to the groin and gluteal cleft (buttocks skin folds). Recurrence is common. Athletes (persons who perspire a lot), tight clothing, and obesity tend to favor growth of the organisms. Severe itching occurs in areas where skin rubs together; for example, between the scrotum and the thigh. Macules in such areas will be red with sharp margins, cleared centers, and the macules will be very active.
(2) Treatment. Give sitz baths (bath in which hips and buttocks of patient are the only parts under water) for infection in the genital area. If the area is acutely inflamed, use cool Burow's solution 1:10,000 for several days before applying any ointments. Any one of these medications can be used: Desenex® ointment applied twice daily; Tinactin®, or Halotex® 1 percent solution or cream. When bathing, rinse away all soap and dry the skin thoroughly. Use drying powder two or three times daily and be sure not to wear any rough clothing.

d. Tinea Pedis (Athlete's Foot)(Epidermophytosis).

(1) Description/characteristics. Tinea of the feet, an extremely common acute or chronic skin problem, occurs on the palms of the hands and soles of the feet. Two clinical forms of this skin problem are seen: filaments that are vegetative organs and spores that do not contain chlorophyll and are parasitic. Classic lesions are weeping vesiculations. There is also a noninflammatory type of lesion with small, nonweeping vesicles in the plantar surface of the foot and the sides of the toes, both very similar to dyshidrosis (deep eruption of blisters occurring primarily on the hands and feet accompanied by intense itching). Some people appear to be more susceptible than others to athlete’s foot; however, the organisms that cause this disease are probably present on most people's feet all the time. The disease usually begins on the third and fourth interdigital spaces of the foot and then spreads to the planter surface of the arch. The lesions are softened areas with scaling borders. Maceration and moisture due to excessive sweating cause more skin lesions than fungi. Involved toenails become thickened and distorted. Acute flare-ups are common during warm weather. Tinea pedis may be confused with softening due to hyperhidrosis (excessive sweating) or occlusive (obstructive) footgear and other skin eruptions.

(2) Treatment. To treat tinea pedis, begin by maintaining good foot hygiene. Dry the skin between the toes thoroughly after bathing and rub away any macerated skin. Routinely, use a bland powder on the affected area. Place cotton between the toes at night. Aluminum chloride 30 percent concentration can be used to dry the area and for its antibacterial properties. Other medications that can be used include tolnaftate solution or cream (the best single topical agent), clotrimazole one percent cream or solution, haloprogin one percent solution or cream, miconazole two percent cream or one-half percent Whitfields ointment.

e. Tinea Versicolor.

(1) Description/characteristics. Tinea versicolor is a mild superficial infection of the skin usually found on the body trunk. This skin infection is caused by fungus. The affected area will not tan. This disease is not particularly contagious. It is apt to occur frequently in patients who wear heavy clothing and perspire a great deal. Epidemics may occur in athletes. Symptoms include mild itching, usually not uncomfortable enough to bother most people. The lesions are velvety, chamois-colored macules which may vary from 4 to 5 mm. The lesions are easily scraped off using a fingernail. The lesions appear on the trunk, upper arms, neck, and face. They may persist for years without notice. You should distinguish them from vitiligo and seborrheic dermatitis.
(2) Treatment. Lather in Selsun® daily. Wash affected areas in diluted vinegar or apply plain vinegar, which should be left on 24 hours a day for 7 days. Use medications that can be applied topically including tolnaftate (Tinactin®) solution (RX 21) and acrisorcin (Akrinol®) cream. Other medications that control this fungal disease include miconazole, clotrimazole, and haloprogin applied to the affected area. Encourage good skin hygiene. If the condition is not properly treated, it will usually recur.

f. Moniliasis (Candidiasis).

(1) Description/characteristics. Moniliasis is an infection of the skin or mucous membranes by a yeast-like fungus. Individuals usually affected include diabetics, obese persons who perspire freely, and pregnant women. Oral contraceptives, antibiotics, severe illness, and moist, hot skin also cause moniliasis. The lesions appear in moist skin fold areas and are bright red macules. Red moist lesions develop in the crotch without central clear zones. On the penis, the areas will be red and white. On the vagina or mouth (thrush), there will be a whitish thick coat (curds with flecks). Satellite or advance lesions will appear outward from the border of the main lesion.

(2) Treatment. Initial management of moniliasis includes washing the area frequently, keeping the area dry, and using nystatin cream or powder. Then, follow these procedures: Keep the area as dry as possible. Use nystatin cream or ointment every 4 hours topically; use nystatin oral suspension for thrush. The brand name for nystatin is Mycostatin®. Neomycin contains nystatin plus a steroid, neomycin sulfate, and gramicidin. Mycolog® cream or gentian violet can be applied. Check the patient's urine for glucose or fasting blood sugar to check for diabetes. If the patient does not respond to conservative therapy, refer him to a physician. Ask males if the wife is having a thick, white vaginal discharge. Nystatin vaginal suppositories can also be used.

4-6. CLOSING

The single most contributing factor producing skin diseases is poor personal hygiene. Educating the troops is the best preventive measure for skin diseases. In making a good evaluation, take into account all the factors covered in this lesson.
EXERCISES, LESSON 4

INSTRUCTIONS. The following exercises are to be completed by writing the answer in the space provided. After you have completed all the exercises, turn to the "Solution to Exercises" at the end of the exercises and check your answers.

1. ____________________ is a common genetically determined skin disease consisting of discrete-pink or dull-red lesions from an unknown cause.

2. ____________________ is an acute or chronic inflammation often sharply demarcated; produced by substances in contact with the skin.

3. ____________________ is the general name for a group of noncontagious diseases that have a tendency toward erythema, swelling edema, oozing, and itching.

4. ____________________ is a chronic inflammatory disease of the sebaceous glands and hair follicles of the skin; the disease is caused by excessive oils.

5. A ____________________ may be described as a mass of fibrous tissue overgrowth at the site of a burn or skin wound that is more prevalent in Blacks and sometimes has crab-like projections.

6. ____________________ are round globular, cutaneous, or subcutaneous tumors arising from the sebaceous glands usually found on the face, neck, scalp, back, and genitalia.

7. Skin lesions which are an acute or chronic inflammatory skin reaction of an allergic origin with eruptions of evanescent (nourishing) wheals and caused by an ingestion of food or drugs are termed ________________ or ________________.

8. A ____________________ is a congenital often hairy discolored spot elevated above the surface of the skin. This lesion may become a malignant melanoma.
9. __________________ is an acute or chronic papulosquamous dermatitis with or without erythema that usually affects the scalp, face, the area of the sternum, interscapular (shoulder blade) area, umbilicus, and body folds.

10. The name of the acute infection of the central nervous system involving primarily the dorsal root ganglia and characterized by a blister and pain in the affected areas is ____________________.

11. Lesions that are single or multiple, elevated with waxy, pearly rooted borders with ulcerations that may occur in later stages are ____________________ skin lesions.

12. ____________________ is a recurrent viral infection characterized by the appearance on the skin or mucous membranes of single or multiple clusters of small vesicles. The disease is benign and occurs in almost everyone at one time or another.

13. ____________________ are highly malignant tumors of the skin or mucous membranes which may metastasize to any organ of the body.

14. A wart can be removed surgically, but if it is a single inconspicuous lesion, it is often better to ______________________.

15. Begin treating impetigo lesions by ______________________

16. Treatment for furuncles (boils) includes applying warm soaks to make the boil form a head. Then, ______________________
17. In treating heat rash, do not cover the area with ointments because __________
________________________________________________________________________

18. After bathing, a patient with tinea pedis should __________________________
________________________________________________________________________

Check Your Answers on Next Page
SOLUTIONS TO EXERCISES, LESSON 4

1. Psoriasis. (para 4-2c(1))
2. Contact dermatitis. (para 4-2b(1))
3. Eczema. (para 4-2a(1))
4. Acne. (para 4-2d(1))
5. Keloid. (para 4-2j(1))
6. Sebaceous cysts. (para 4-2f(1))
7. Urticaria.  
   Hives (para 4-2h(1))
8. Nevi or mole. (para 4-2i(1))
9. Seborrheic dermatitis. (para 4-2g(1))
10. Herpes zoster or shingles. (para 4-3b(1))
11. Basal cell cancer. (para 4-2k(1))
12. Herpes simplex. (para 4-3a(1))
13. Malignant melanomas. (para 4-2l(1))
14. Leave the wart alone. (para 4-3c(2))
15. Washing the affected area with soap and water three times a day. (para 4-4a(2))
16. Make an incision and drain the boil. (para 4-4b(2))
17. Ointments trap sweating causing heat rash to become worse. (para 4-4e(2))
18. Dry the skin between the toes thoroughly and rub away any macerated skin. (para 4-5d(2))