Week 3 - NR 511. Week 3 Davis Edge- Skin and Eye problems

Differential Diagnosis & Primary Care Practicum (Chamberlain University)

NR 511 Davis Edge Skin Review Questions Week 3

A 22-year-old African American female presents to your family practice office complaining of progressive skin discoloration. She is adopted and has no known family history of skin problems. The patient notes nonpalpable patches of skin loss and blanching of her forehead and both hands and feet. It has developed over a period of 6 months and appears to have stopped. It is not pruritic, and there is no erythema or sign of infectious etiology. What is the most likely diagnosis?

- **Vitiligo**- This is the physical description of vitiligo.
- **Alopecia** Alopecia involves hair loss, not skin discoloration.
- **Addison Disease** This condition involves hyperpigmentation of the skin, not hypopigmentation of the skin.
- **Tinea Versicolor** This refers to hypopigmentation of the skin due to a fungal infection and is noticed mostly after sun exposure.

Which presentation is most concerning for skin cancer?

- **Dark pigmentation of 1 solitary nail that has developed quickly and without trauma.** This is concerning for acral melanoma
- **A 1-mm blue, round, nonpalpable discoloration of the skin that has been present since birth without change.** This describes a benign blue nevus, common in patients of Asian descent.
- **A 5-mm black mole with round, regular boarders.** This mole is round, regular, less than 6 mm, and without change; it is likely benign.
- **A 2-mm brown mole that is raised 1 mm but round and regular.** This mole is small, regular, minimally raised, and only 1 color; it is likely benign.

A 4-year-old male presents to your pediatric clinic with his mother complaining of an itchy rash, mostly between his fingers. This has been going on for multiple days and has been getting worse. The patient recently started at a new day care. On physical exam, the patient is afebrile and has multiple small (1-2 mm) red papules in sets of 3 located in the web spaces between his fingers. He also has signs of excoriation. What is the treatment for this problem?

- **Permethrin lotion for the patient and also his family members. –** This is the treatment for scabies
- **Cold compresses and hydrocortisone cream 1% twice a day. -** This would decrease inflammation but would not cure the scabies.
- **Over-the-counter Benadryl cream.** This would provide itching relief but would not cure the scabies.
- **Ketoconazole cream.** This would treat a fungal infection, not scabies.

Which of the following patients would not be at risk of *Candida* infection?

- **A patient with a history of coronary artery disease.** Coronary artery disease doesn't increase the risk of *Candida* infection.
- **A diabetic patient.** Diabetes increases the risk of *Candida* infection.
- **A patient requiring home antibiotics while recovering from an operation for an infected hernia.** Use of long-term antibiotics increases the risk of *Candida* infection.
- **A patient using a steroid regimen for asthma control** Use of long-term steroids increases the risk of *Candida* infection.

A 3-year-old patient presents to your pediatric office with her mother. She has recently been started in day care. Her mother noted slight perioral erythema on the right side of the patient's mouth prior to bed last night. The patient awoke today with 3 small, superficial, honey-colored vesicles where the erythema was last night. The patient has no surrounding erythema. She had no difficulty eating this morning and is active and energetic and doesn't appear lethargic or fatigued. She is also afebrile. How would you treat this child?

- **Local debridement and mupirocin for 5 days**. This is the treatment of choice for impetigo.
- **Oral Keflex for 7 days.** This is for more severe cases in which the patient is febrile.
- **Topical compress with Burow solution and follow-up in 2 to 3 days.** This compress would help but would not prevent bacterial spread.
- **Local debridement and topical compress with Burow solution and close follow-up.** This would help as well but wouldn't prevent bacterial spread.

A 22-year-old college student presents to your urgent care clinic complaining of a rash. She was recently on spring break and spent every night in the hot tub at her hotel. On physical exam, she has multiple small areas of 1- to 2-mm erythematous pustules that are present mostly where her bathing suit covered her buttocks. What is the most likely pathogen causing these lesions?

- ***Pseudomonas aeruginosa*.** This is a common cause of hot tub folliculitis.
- ***Klebsiella*.** This could be a cause of folliculitis in an immunocompromised patient.
- ***Staphylococcus aureus*.** Gram-positive bacteria can cause folliculitis, but this is not the most common pathogen found in a hot tub.
- ***Streptococcus*.** Gram-positive bacteria can cause folliculitis, but this is not the most common pathogen found in a hot tub.

Which human papillomavirus serotypes most commonly cause cancer?

- **Serotypes 16 and 18**. – Cause Cancer
- **Serotypes 6 and 11**. Cause genital warts
- **Serotypes 3 and 10.** Cause flat warts
- **Serotypes 27 and 29.** Cause plantar warts

A 27-year-old female comes in to your primary care office complaining of a perioral rash. The patient noticed burning around her lips a couple days ago that quickly went away. She awoke from sleep yesterday and noticed a group of vesicles with erythematous bases where the burning had been before. There is no burning today. She is afebrile and has no difficulty eating or swallowing. What test would confirm her diagnosis?

- **Tzanck smear.** This would show giant cells consistent with herpes simplex virus.
- **Potassium hydroxide (KOH) prep.** This is used to diagnose fungal infections.
- **Exam under a Wood lamp.** This is used to diagnose fungal infections.
- **Sterile culture sent for aerobic and anaerobic bacteria.** This would help with bacterial causes of these lesions; a polymerase chain reaction (PCR) would have to be sent to diagnose herpes simplex.

Which condition is not included in the atopic triad?

- **Aspirin sensitivity** This is included in the ASA, or Samter, triad, which also includes nasal polyps and asthma.
- **Asthma** This is included in the atopic triad.
- **Allergic Rhinitis** This is included in the atopic triad.
- **Eczema** This is included in the atopic triad.

A 16-year-old male presents to your office. He was sent by an orthopedist. He has recently had surgical fixation of a humerus fracture. The patient has been going to physical therapy and has been developing a rash on his arm after therapy that disappears shortly after returning home. He does not have the rash prior to therapy. The patient denies fevers and chills, and his incision is well healed, with no signs of infection. Of note, the patient has been experiencing more hand edema than the average patient and has had edema wraps used at the end of therapy to help with his swelling. The wraps are made of a synthetic plastic material. The rash the patient gets is erythematous and blotchy, not raised; it is on the operative upper extremity. What is the most likely diagnosis?

- **Contact dermatitis** The patient's history and rash are consistent with a latex or plastic sensitivity due to the edema wraps used in therapy.
- **Atopic dermatitis** The patient's rash is not consistent with eczema, which is dry and erythematous and usually found in the skin folds and around the eyes.
- **Seborrheic dermatitis** The patient's rash is not consistent with seborrheic dermatitis, as no greasy yellow scales are present.
- **Psoriasis** Psoriasis is typically described as silvery scales on top of an erythematous, raised base.

Which of the following statements about psoriasis is not true?

- **Psoriatic lesions are often silvery scales that form over erythematous plaques.** This is a general description of psoriasis.
- **Psoriatic lesions often occur in the folds of the elbows and behind the knees.** This is untrue; lesions usually occur on the fronts of the knees, the posterior aspects of the elbows, and the scalp.
- **People with psoriasis have a greater risk of depression than the average population.** This is true; there is a correlation between psoriasis and an increased risk of developing depression.
- **Psoriasis has a genetic component.** This is true; psoriasis has a genetic component and is associated with genetic findings on chromosomes 4, 6, 8, 16, and 17.

Which of the following has/have not been linked to the use of isotretinoin?

- **Elevated liver transaminases.** This is listed as a possible adverse reaction to isotretinoin.
- **Depression, psychosis, and suicidality.** This is listed as a possible adverse reaction to isotretinoin.
- **Benign intracranial hypertension.** This is listed as a possible adverse reaction to isotretinoin.
- **Pancreatitis.** This is not an adverse effect of isotretinoin.

A 55-year-old landscaper presents to your primary care office complaining of a small skin lesion on his face. The patient states the lesion causes no pain or other symptoms. On physical exam, you notice a small (3 mm) papule that is flesh-colored and irregular. To palpation, the lesion feels hard and like sandpaper. What type of malignancy is this patient at risk for given the appearance of this lesion?

- **Squamous Cell Carcinoma.** The lesion described is an actinic keratosis, which is a premalignant lesion that can progress to squamous cell carcinoma.
- **Melanoma** Melanoma is a type of cancer that arises in melanin-forming cells; the lesion described here is not melanoma.
- **Basal Cell Carcinoma** Basal cell carcinoma typically presents as a papular lesion with telangiectasia.
- **Rosacea** Rosacea is not associated with cancer.

An eczematous skin reaction may result from:

- **Penicillin** Penicillin, neomycin, phenothiazines, and local anesthetics may cause an eczematous type of skin reaction.
- **Allopurinol (Zyloprim)** Allopurinol (Zyloprim) and sulfonamides may cause exfoliative dermatitis.
- **Oral contraceptives.**
  Oral contraceptives may cause erythema nodosum.
- **Phenytoin (Dilantin)** Phenytoin (Dilantin) and procainamide (Pronestyl) may cause drug-related systemic lupus erythematosus.

Sophie brings in her husband, Nathan, age 72, who is in a wheelchair. On his sacral area, he has a deep crater with full-thickness skin loss. Subcutaneous tissue is visible but muscle and bone are not. Which pressure ulcer stage is this?

- **Stage I** Stage I is nonblanchable erythema of intact skin.
- **Stage II** Stage II is partial-thickness skin loss involving the epidermis and/or dermis. It may appear as an abrasion, blister, or shallow ulcer.
- **Stage III** A stage III pressure ulcer is one that has a deep crater with full-thickness skin loss. Subcutaneous tissue may be visible; however, underlying structures, such as tendon, muscle, and bone, are not visible. There may be undermining or tunneling. Keep in mind that in areas with little or no subcutaneous tissue, such as the heel or bridge of the nose, stage III ulcers may be shallow.
- **Stage IV** Stage IV involves full-thickness skin loss with extensive destruction, tissue necrosis, or damage to muscle, bone, or supporting structures. In a stage IV pressure ulcer, underlying structures are visible or directly palpable.

A Gram stain of a lesion reveals large, square-ended, gram-positive rods that grow easily on blood agar. Which diagnosis does this finding confirm?

- **Dermatophyte Infection** A dermatophyte infection is diagnosed with a potassium hydroxide preparation revealing hyphae and spores. In addition, fungal cultures demonstrate different fungi.
- **Tuberculosis (scrofuloderma)** Tuberculosis (scrofuloderma) is diagnosed with a histologic examination revealing caseous necrosis and acid-fast bacilli.
- **Sarcoidosis** Sarcoidosis is diagnosed with a biopsy revealing noncaseating granulomas.
- **Anthrax** Anthrax is diagnosed with a Gram stain revealing large, square-ended, gram-positive rods that grow easily on blood agar.

The ABCDEs of melanoma identification include which of the following?

- **Asymmetry: one half does not match the other half.** A is for asymmetry: one half does not match the other half. One of the warning signs of cancer is a lesion that does not heal or an area that changes in appearance. The ABCDEs of melanoma identification should be taught to all clients.
- **Border: the borders are regular; they are not ragged, notched, or blurred.**
  B is for border irregularity: the edges of a melanoma are ragged, notched, or blurred.
- **Color: pigmentation is uniform.** C is for color: pigmentation is not uniform; there may be shades of tan, brown, and black as well as red, white, and blue.
- **Diameter: the diameter is 5 mm.** D is for diameter greater than 6 mm. (E is for an evolving lesion, ie, changing in any way.)

Sandra, age 32, comes in to the clinic. She has painful joints and a distinctive rash in a butterfly distribution on her face. The rash has red papules and plaques with a fine scale. What do you suspect?

- **Lymphocytoma cutis** Lymphocytoma cutis is also most common on the face and neck. It occurs in both sexes and has smooth, red to yellow-brown papules up to 5 cm in diameter.
- **Relapsing polychondritis** Relapsing polychondritis occurs in adults with a history of arthritis. It appears as macular erythema, tenderness, and swelling over the cartilaginous portions of the ears.
- **Systemic lupus erythematosus** If a client comes in to the clinic complaining of painful joints and has a distinctive rash on the face that consists of red papules and plaques with a fine scale in a butterfly distribution, suspect systemic lupus erythematosus. Acute lupus erythematosus occurs most often in young adult women. In the acute phase, the client is febrile and ill. The presence of these skin lesions in a client with neurological disease, arthritis, renal disease, or neuropsychiatric disturbances also supports the diagnosis.
- **An allergic reaction** Sandra's joint pain and the bilateral distribution of her rash are not suggestive of an allergic reaction.

Your 24-year-old client whose varicella rash just erupted yesterday asks you when she can go back to work. What do you tell her?

- **"Once all the vesicles are crusted over."** A client who has a varicella rash can return to work once all the vesicles are crusted over. Varicella is contagious 48 hours before the onset of the vesicular rash, during the rash formation (usually 4-5 days), and during the several days it takes the vesicles to dry up. The characteristic rash appears 2 to 3 weeks after exposure.
- **"When the rash is entirely gone."** A client who has a varicella rash can return to work once all the vesicles are crusted over.
- **"Once you have been on medication for at least forty-eight hours."** Treatment is effective only if started within the first few days and then only to shorten the course of the disease.
- **"Now, as long as you stay away from children and pregnant women."** Clients should avoid contact with pregnant women and children who have not been exposed to varicella.

Client teaching is an integral part of successfully treating pediculosis. Which of the following statements would you incorporate into your teaching plan?

- **"It's okay to resume sharing combs, headsets, and so on after being lice-free for one month."** Clients and parents should be instructed not to share hats, combs, scarves, headsets, towels, and bedding.
- **"Soak your combs and brushes in rubbing alcohol for eight hours."** Combs and brushes should be soaked in rubbing alcohol for 1 hour.
- **"Itching may continue for up to a week after successful treatment."** Client education is essential when treating pediculosis. Clients should be informed that itching may continue for up to a week after successful treatment because of the slow resolution of the inflammatory reaction caused by the lice infestation.
- **"Spraying of pesticides in the immediate environment is essential to prevent recurrence."** Excessive decontamination of the environment is not necessary. Environmental spraying of

pesticides is not effective and, therefore, is not recommended. Bedclothes and clothing should be washed in hot, soapy water.

Tom, age 50, is complaining of an itchy rash that occurred about a half hour after putting on his leather jacket. He recalls having a slightly similar rash last year when he wore his jacket. The annular lesions are on his neck and both arms. They are erythematous, sharply circumscribed, and both flat and elevated. His voice seems a little raspy, although he states that his breathing is normal. What is your first action?

- **Order a short course of systemic corticosteroids.** All the actions are appropriate. However, it is most important to determine if respiratory distress is imminent; if it is, epinephrine must be administered.
- **Determine the need for 0.5 mL 1:1000 epinephrine subcutaneously.** Tom has hives. Although all the actions are appropriate, the first step is to determine the need for 0.5 mL 1:1000 epinephrine subcutaneously. With Tom's neck involvement, it is most important to determine if respiratory distress is imminent; if it is, epinephrine must be administered.
- **Start daily antihistamines.** All the actions are appropriate. However, it is most important to determine if respiratory distress is imminent; if it is, epinephrine must be administered.
- **Tell Tom to get rid of his leather jacket.** All the actions are appropriate. However, it is most important to determine if respiratory distress is imminent; if it is, epinephrine must be administered.

When palpating the skin over the clavicle of Norman, age 84, you notice tenting, which is:

- **Indicative of dehydration** Skin turgor is decreased with dehydration.
- **Common in thin older adults** Tenting—which occurs when pinched skin remains pinched for a few moments before resuming its normal position—over the clavicle is common in thin older adults. Skin turgor is decreased with dehydration and increased with edema and scleroderma.
- **A sign of edema** Skin turgor is increased with edema.
- **Indicative of scleroderma** Skin turgor is increased with scleroderma

The nurse practitioner (NP) tells Samantha, age 52, that she has an acrochordon on her neck. What is the NP referring to?

- **A nevus-** a nevus is a mole
- **A skin tag-** Skin tags (acrochordons) are benign overgrowths of skin commonly seen after middle age and usually found on the neck, axillae, groin, upper trunk, and eyelids.
- **A lipoma** A lipoma is a benign subcutaneous tumor that consists of adipose tissue.
- **A wart** A wart is a circumscribed elevation due to hypertrophy of the papillae and epidermis.

Maryann, age 28, presents to the clinic because of a rapid onset of patchy hair loss. The skin within these oval patches of hair loss is very smooth. Tapered hairs that resemble exclamation points are seen at the margin of a patch of hair loss. Based on these findings, you suspect Maryann has:

- **Alopecia areata** The findings are consistent with alopecia areata, ie, nonscarring hair loss of rapid onset, the pattern of which is most commonly sharply defined round or oval patches.
- **Trichotillomania** The cause of trichotillomania is mechanical, and the patch typically has an irregular, angulated border.
- **Tinea Capitis** Tinea capitis is caused by a fungal infection of the skin and hair shaft. Most commonly there is diffuse or patchy adherent scale on the scalp.
- **Androgenetic alopecia** Androgenetic alopecia is premature loss of hair in an androgen-sensitive area of the scalp; in men, it is commonly known as male-pattern baldness.

Roy, age 13, was recently diagnosed with epilepsy and prescribed carbamazepine for control of his seizures. He has developed erythematous papules, dusky appearing vesicles, purpura, and target lesions that have erupted rapidly and are more centrally distributed on the face. He has hemorrhagic crusts on his lips. He tells you his skin feels tender and burns. Additionally, he has developed exudative conjunctivitis. These findings are indicative of:

- **Urticaria** Exudative conjunctivitis is not a typical finding in urticaria.
- **Pemphigus vulgaris** Exudative conjunctivitis is not a typical finding in pemphigus vulgaris.
- **Herpetic gingivostomatitis** Exudative conjunctivitis is not a typical finding in herpetic gingivostomatitis.
- **Steven Johnson Syndrome** SJS is a severe blistering mucocutaneous syndrome that involves at least 2 mucous membranes. Drugs frequently implicated in the development of SJS are phenytoin, phenobarbital, carbamazepine, sulfonamides, and aminopenicillins.

Eric, age 52, has gout. What do you suggest?

- **Using salicylates for an acute attack.** Salicylates should be avoided because they block renal excretion of uric acid.
- **Limiting consumption of purine-rich foods.** For a client with gout, the consumption of purine-rich foods, such as organ meats, should be limited to prevent uric acid buildup.
- **Testing his uric acid level every 6 months.** Annual testing of the serum uric acid level is sufficient.
- **Decreasing fluid intake.** Fluids should be increased to 2 L per day and alcohol should be limited.

Marge, age 36, is planning to go skiing with her fiancé. He has warned her about frostbite, and she is wondering what to do if frostbite should occur. You know she's misunderstood the directions when she tells you which of the following?

- **"I should remove wet footwear if my feet are frostbitten."** Advise the client to remove wet footwear if the feet are frostbitten.
- **"I should rub the area with snow."** Rubbing or massaging the frostbitten area, especially with snow, may cause permanent tissue damage.
- **"I should apply firm pressure to the area with a warm hand."** Advise the client to apply firm pressure to the area with a warm hand.
- **"I should place my hands in my axillae if my hands are frostbitten."** Advise the client to place the hands in the axillae if the hands are frostbitten.

A 70-year-old client with herpes zoster has a vesicle on the tip of the nose. This may indicate:

- **Ophthalmic zoster** (herpes zoster ophthalmicus) involves the ciliary body and may appear clinically as vesicles on the tip of the nose. A client with a herpetic lesion on the nose needs to be referred to an ophthalmologist to preserve the eyesight.
- **Herpes simplex** primarily occurs on the perioral, labial, and genital areas of the body.
- **Kaposi sarcoma** in the older adult usually occurs in the lower extremities.
- **Orf and milker's nodules** almost always appear on the hands.

Which disease usually starts on the cheeks and spreads to the arms and trunk?

- **Erythema infectiosum (fifth disease)** usually starts on the cheeks and spreads to the arms and trunk.
- **Rocky Mountain spotted fever**, which is associated with a history of tick bites, starts as a maculopapular rash with erythematous borders, appearing first on the wrists, ankles, palms, soles, and forearms.
- **Rubeola (measles)** starts as a brownish-pink maculopapular rash around the ears, face, and neck, and then progresses over the trunk and limbs.
- **Rubella (German measles)** starts as a fine, pinkish, macular rash that becomes confluent and pinpoint after 24 hours.

Jennifer, age 32, is pregnant and has genital warts (condylomata) and would like to have them treated. What should you order?

- **Benzoyl peroxide** is used for acne.
- **Podophyllin (Podocon-25)** is contraindicated in pregnancy.
- **Trichloroacetic acid**- Genital warts (condylomata) may be treated using liquid nitrogen cryotherapy, trichloroacetic acid, or podophyllin (Podocon-25). However, podophyllin is contraindicated in pregnancy.
- **Corticosteroids** are not used to remove warts.

Which treatment is considered the gold standard in tissue-conserving skin cancer removal?

- **Cryosurgery** involves the use of liquid nitrogen to burn off lesions.
- **Simple excision** uses a scalpel to excise lesions.
- **Photodynamic therapy** may be used with acne.
- **Mohs micrographic surgery.** MMS is considered the gold standard in tissue-conserving skin cancer removal. MMS is a specialized type of surgery consisting of the removal of the entire tumor with the smallest possible margin of normal skin.

A dark-field microscopic examination is used to diagnose:

- **Scabies** Applying a special tetracycline solution, followed by shining a Wood lamp on the skin, may accentuate the burrows of scabietic mites, thus helping to diagnose scabies.
- **Leprosy** A direct acid-fast stain is used to diagnose leprosy.
- **Syphilis** A dark-field microscopic examination is used to diagnose syphilis. With its special condenser, a dark-field microscope causes an oblique beam of light to refract off objects too small to be seen by conventional microscopes, such as the narrow organism (*Treponema pallidum*) that causes syphilis.
- **Candida infections** A potassium hydroxide (KOH) stain helps diagnose *Candida* infections.

Louis, age 52, presents with pruritus with no rash present. He has hypertension, diabetes, and end-stage renal disease (ESRD). Which of the following would be included in the differential diagnosis?

- **Uremia from chronic renal disease** All of the conditions listed result in pruritus. However, only uremia from chronic renal disease results in pruritus with no rash present. The other conditions—contact dermatitis, lichen planus, and psoriasis—all present with a rash.
- **Contact dermatitis.** Contact dermatitis presents with a rash as well as pruritus.
- **Lichen Planus** Lichen planus presents with a rash as well as pruritus.
- **Psoriasis** Psoriasis presents with a rash as well as pruritus.

Susan states that her fiancé has been frostbitten on the nose while skiing and is fearful that it will happen again. What do you tell her?

- **"Don't worry—as long as he gets medical help in the first few hours after being frostbitten again, he'll recover."** With continued exposure, vasoconstriction and increased viscosity of the blood can cause infarction and necrosis of the nose.
- **"Once frostbitten, he should not go out skiing again."**
  If he insists on skiing, Susan's fiancé should be extremely careful and wear a warm knit mask that covers the entire face, with only small holes for his orifices.
- **"If it should happen again, massage the nose with a dry hand."** Massaging a frostbitten nose may cause tissue damage.
- **"Infarction and necrosis of the affected tissue can happen with repeated frostbite."** Permanent tissue damage can occur with a second episode of frostbite involving the same skin surface.

Which skin cancer that arises from skin cells, characteristically occurs on body areas exposed to the sun, most commonly presents as a pearly nodule with fine telangiectasias over the surface and a border that appears rolled, and is the most common skin cancer?

- **Actinic keratosis** often precedes squamous cell carcinoma.
- **Basal cell carcinoma** arises from skin cells and is the most common type of nonmelanoma skin cancer (greater than 80%).
- **Squamous cell carcinoma** is less common and accounts for 20% of skin cancers.
- **Melanoma** begins in the melanocytes.

What is the most important thing a person can do to maintain healthy skin and hopefully reduce wrinkles?

- **Keep well hydrated.** Although keeping the skin well hydrated promotes skin health, it does not prevent wrinkles.
- **Use sunscreen with a sun protection factor (SPF) of at least 45.** Using a sunscreen with an SPF of at least 15 is another important way to promote the health of the skin.
- **Avoid smoking.** The most important thing a person can do to maintain healthy skin is not smoke. Smokers develop more wrinkles and have elastosis, decreased tissue perfusion and oxygenation, and an adverse exposure to free radicals on elastic tissue.
- **Use mild defatted or glycerin soap.** Using mild defatted or glycerin soap maintains texture and hydration but does not help prevent wrinkles.

You suspect a platelet abnormality in a 40-year-old woman who presents to your clinic with:

- **Red to blue macular plaques. -** Red to blue macular plaques are ecchymoses.
- **Multiple freckle-like macular lesions in sun-exposed areas.** Multiple freckle-like macular lesions in sun-exposed areas indicate xeroderma pigmentosum.
- **Numerous small, brown, nonscaly macules that become more prominent with sun exposure.** Numerous small, brown, nonscaly macules that become more prominent with sun exposure are freckles.
- **Red, flat, nonblanchable petechiae.** A client with a platelet abnormality may present with red, flat, nonblanchable petechiae.

Which of the following should be used with all acne medications?

- **Sunscreen** Sunscreen should be used with all acne medications.
- **Oily makeup** Oily makeup and oily hair conditioners or scalp products should be avoided.
- **Plain Soap** The face should be washed gently at least twice per day with an antibacterial soap.
- **A light alcohol wipe once a week** Alcohol wipes can cause excessive skin dryness.

You are teaching Harvey, age 55, about the warts on his hands. What is included in your teaching?

- **Treatment is usually effective, and most warts will not recur afterward.** Despite treatment, most warts recur.
- **Because warts have roots, it is difficult to remove them surgically.** Contrary to popular opinion, warts do not have roots; the underside of a wart is smooth and round.
- **Warts are caused by the human papillomavirus.** Warts are caused by the human papillomavirus. One in four people is infected with this virus, and most warts recur despite treatment.
- **Shaving the wart may prevent its recurrence.** Abrading the skin can spread the virus; vigorous rubbing, shaving, and nail biting, can do the same.

Which of the following statements about malignant melanomas is true?

- **They usually occur in older adult males.** Malignant melanomas usually occur in middle-aged adults of both sexes.
- **There will usually be no family history of melanoma.** There will usually be a family history of melanoma.
- **They are common in populations with dark skin.** Melanomas occur rarely in dark-skinned populations; when they do, the lesions usually develop on the palms of the hands and the soles of the feet and under the nails.
- **The prognosis is directly related to the thickness of the lesion.** The prognosis for a patient with a malignant melanoma is directly related to the thickness of the lesion.

Lee brings her 13-year-old son to your clinic. He has been complaining of a rash on the buttocks, anterior thighs, and posterolateral aspects of his upper arms. He tells you it is mildly pruritic and looks like “gooseflesh.” On examination, the rash appears as small, pinpoint, follicular papules on a mildly erythematous base. You explain to Lee that the benign condition is likely to resolve by the time her son reaches adulthood, and it is known as:

- **Comedones of acne.** The distribution of comedones of acne is on the face, chest, and upper back.
- **Molluscum contagiosum.** Molluscum contagiosum involves waxy-appearing lesions with a central umbilication.
- **Keratosis pilaris.** The description and examination of this rash are consistent with keratosis pilaris, which most commonly appears on the cheeks, buttocks, anterior thighs, and posterolateral aspects of the upper arms.
- **Atopic dermatitis.** Although it is characterized by a pruritic rash with dry, rough skin, atopic dermatitis in adolescents is more often located on extensor surfaces, the cheeks, and the hands.

Jim, age 59, presents with recurrent, sharply circumscribed red papules and plaques with powdery white scale on the extensor aspects of his elbows and knees. What do you suspect?

- **Actinic keratosis.** Actinic keratosis is distributed on sun-exposed areas, such as the face, head, neck, and dorsum of the hands, and appears as a poorly circumscribed, pink to red, slightly scaly lesion.
- **Eczema.** Eczema presents as a group of pinpoint pruritic vesicles and papules on a coin-shaped, erythematous base and usually worsens in winter.
- **Psoriasis.** If a client presents with recurrent, sharply circumscribed red papules and plaques with powdery white scale on the extensor aspects of his elbows and knees, suspect psoriasis. This is a classic presentation of psoriasis. Besides the extensor aspects of the elbows and knees, it occurs frequently in the presacral area and scalp, although lesions may occur anywhere.
- **Seborrheic dermatitis.** Seborrheic dermatitis often appears on the scalp. SX range from dry flakes to yellow, greasy scales with reddened skin. It may also occur on other oily areas such as the face, upper chest and back.

Thomas, age 35, uses a high-potency corticosteroid cream for a dermatosis. He also currently has tinea corporis. You tell him the following regarding the cream:

- **"You must use this for an extended period of time for it to be effective."** Topical corticosteroids should not be used for an extended period of time.
- **"It will work better if you occlude the area."** The area should not be occluded.
- **"It may exacerbate your concurrent tinea corporis."** If a client uses a high-potency corticosteroid cream for a dermatosis, tell the client that it may exacerbate concurrent conditions such as tinea corporis and acne. Topical corticosteroids should not be used indiscriminately on all cutaneous eruptions.
- **"Be sure to use it daily."** Intermittent therapy with high-potency agents, such as every other day, or 3 to 4 consecutive days per week, may be more effective and cause fewer adverse effects than continuous regimens. This is also true of lower potency corticosteroids.

Jill, age 29, has numerous transient lesions that come and go, and she is diagnosed with urticaria. What do you order?

- **Aspirin** is to be avoided.
- **Ibuprofen** is to be avoided.
- **Opioids** are to be avoided.
- **Antihistamines** Transient urticaria requires antihistamines on a regular basis.

You are examining Barbara, age 27, who presents with multiple dry, dusky red, well-localized plaques with a “stuck-on” appearance. They are 5 to 20 mm in diameter and located on her face, scalp, and external ears. You note there is atrophy, telangiectasia, depigmentation, and follicular plugging present. On examination of the scalp, there are areas of total hair loss. There is depigmented scarring of the concha of the ear. Your most likely diagnosis is:

- **Seborrheic dermatitis.**
  The dry and stuck-on appearance of the lesions of discoid lupus erythematosus differentiates them from seborrheic dermatitis and psoriasis. Old lesions that have caused scarring further distinguish these lesions from seborrheic dermatitis, psoriasis, and tinea capitis.
- **Discoid lupus erythematosus.** The lesions of discoid lupus erythematosus are dry and have a stuck-on appearance, which differentiates them from seborrheic dermatitis and psoriasis. Old lesions that have caused scarring further distinguish these lesions from seborrheic dermatitis, psoriasis, and tinea capitis. Depigmented scarring of the concha of the ear is a classic finding.
- **Psoriasis.** The dry and stuck-on appearance of the lesions of discoid lupus erythematosus differentiates them from seborrheic dermatitis and psoriasis. Old lesions that have caused scarring further distinguish these lesions from seborrheic dermatitis, psoriasis, and tinea capitis.
- **Tinea capitis.** Old lesions that have caused scarring distinguish these lesions from tinea capitis.

Mildred, age 72, presents to the clinic with a blistering rash that is generalized but located mostly in skin folds and on flexural areas. She describes the course of the rash as beginning with pruritic urticarial papules that coalesced into plaques that turned dark red in about 2 weeks, followed by the development of vesicles and bullae. She tells you that the lesions are moderate to severely pruritic. During your exam, you determine the bullae are very tense and do not rupture when pressure is applied. Her daily medications include an angiotensin-converting enzyme (ACE) inhibitor, a loop diuretic, and a nonsteroidal anti-inflammatory drug (NSAID). What is your diagnosis?

- **Dermatitis herpetiformis.** Dermatitis herpetiformis presents with smaller vesicles and is more often found on elbows, knees, buttocks, and the posterior scalp.
- **Pemphigus vulgaris.** The bullae of pemphigus vulgaris are fragile.
- **Bullous drug eruption.** Bullous drug eruptions occur in areas similar to those favored by bullous pemphigoid, and a thorough review of the client’s medications should be done. Some loop diuretics, ACE inhibitors, and NSAIDs have been implicated in triggering bullous pemphigoid.
- **Bullous pemphigoid.** Most cases of bullous pemphigoid occur after 60 years of age. The bullae are very tense; firm pressure on the blisters will not result in extension into the normal skin, which occurs with pemphigus vulgaris.

In a burn trauma, which blood measurement rises as a secondary result of hemoconcentration when fluid shifts from the intravascular compartment?

- **Hemoglobin.** The hemoglobin level decreases secondary to hemolysis.
- **Sodium.** The sodium level decreases secondary to massive fluid shifts into the interstitium.
- **Hematocrit.** In burn trauma, the hematocrit rises as fluid, not blood, shifts from the intravascular compartment.
- **Blood urea nitrogen (BUN).** The BUN level increases secondary to dehydration.

Ashley, age 6 months, has a *Candida* infection in the diaper area. What do you suggest to the parent?

- **"Use rubber or plastic pants to contain the infection and prevent it from getting to the thighs."** To prevent diaper rash, the infant should be kept dry as much as possible and the use of rubber or plastic pants should be discouraged.
- **"Keep the area as dry as possible."** Clients must be taught to decrease favorable environmental conditions for *Candida* (eg, moisture, warmth, and poor air circulation).
- **"Use baby powder with cornstarch."** Baby powder with cornstarch should not be used because it will worsen the infection (*Candida* can utilize the cornstarch as food).
- **"Keep Ashley away from other babies until the infection is cleared up."** There is no need to isolate Ashley.

Sandra, age 69, is complaining of dry skin. What do you advise her to do?

- **Every day, when bathing, vigorously use a washcloth to exfoliate the upper layers of the stratum corneum.** Advise the client that it is not necessary to take a bath or shower every day because soaps and hot water are drying.
- **Bathe or shower with lukewarm water and use a mild soap or skin cleanser.** If a client is complaining of dry skin, the client should use tepid water and a mild cleansing cream or soap.
- **Use a dehumidifier.** Sandra should use a humidifier to humidify the air.
- **Decrease the oral intake of fluids.** Sandra should increase the oral intake of fluids to assist in replacing some of the fluid lost from the skin.

Michael, a 25-year-old military reservist, presents to your clinic for a rash that began on his chest and has since developed into smaller lesions that are more concentrated on the lower abdomen and pubic area. In obtaining a history of the present illness, he reports that he had an upper respiratory infection 1 month before the rash developed. He tells you it started with 1 large oval-shaped lesion on his left chest, and 1 to 2 weeks later he developed numerous smaller lesions on the lower abdomen and groin. It has been 2 weeks since the smaller lesions developed, and he tells you he is concerned that the rash isn't improving. As you examine the patient, you note that the lesions are salmon-colored and have a thin collarette of scale within them. The original lesion is still present. You suspect Michael has:

- **Guttate psoriasis.** Guttate psoriasis often follows a streptococcal infection. The lesions of guttate psoriasis have a different morphology and distribution.
- **Tinea versicolor.** Tinea versicolor may be excluded by a potassium hydroxide examination early in the course. The patches of skin present as lighter or darker than the surrounding skin. It is not preceded by a viral infection.
- **Secondary syphilis.** Secondary syphilis is excluded by a rapid plasma reagin (RPR) or fluorescent treponemal antibody absorption (FTA-ABS) test. The sore (chancre) is a small firm, round, and painless lesion that appears at the original infection site- such as the mouth, anus, or genitals.
- **Pityriasis rosea.** Pityriasis rosea is a common, self-limiting, usually asymptomatic eruption with a distinct initial lesion. This "herald patch," which appears suddenly and without symptoms, usually is on the chest or back. Secondary lesions appear 1 to 2 weeks later while the herald patch remains. The collarette scaling is another classic symptom of pityriasis rosea. The lesions usually resolve spontaneously in 4 to 12 weeks without scarring. Outbreaks have been known to occur in close quarters like military barracks and dormitories.

Caroline has a 13-year-old daughter who has had 2 recent infestations of lice. She asks you what she can do to prevent this. You respond:

- **"After two days of no head lice, her bedding is lice-free."** Lice can survive for more than 2 days off the scalp, so they could still be alive in the bed linen after 2 days.
- **"Boys are more susceptible, so watch out for her brother also."** Girls are more susceptible than boys.
- **"After several infestations, she is now immune and is no longer susceptible."** Immunity against head lice is never acquired.
- **"Don't let her share hats, combs, or brushes with anyone."** Head lice may be transmitted by sharing hats, combs, or brushes, so these practices should be discouraged.

Justin, an obese 42-year-old, cut his right leg 3 days ago while climbing a ladder. Today his right lower leg is warm, reddened, and painful, without a sharply demarcated border. What do you suspect?

- **Diabetic neuropathy.** Although Justin may have diabetic neuropathy, the information is not complete enough for you to suspect that condition.
- **Cellulitis.** Cellulitis is a spreading infection of the epidermis and subcutaneous tissue that usually begins after a break in the skin. The skin of this patient's right lower leg is warm, red, and painful. Although Justin may have diabetic neuropathy, peripheral vascular disease, or a stasis ulcer, the information is not complete enough for you to suspect those conditions. The information and assessment data given fully support a diagnosis of cellulitis.
- **Peripheral vascular disease.** Although Justin may have peripheral vascular disease, the information is not complete enough for you to suspect that condition.
- **A beginning stasis ulcer.** Although Justin may have a stasis ulcer, the information is not complete enough for you to suspect that condition.

Danny, age 18, presents with a pruritic rash on his upper trunk and shoulders. You observe flat to slightly elevated brown papules and plaques that scale when they are rubbed. You also note areas of hypopigmentation. What is your initial diagnosis?

- **Lentigo syndrome.** Lentigines are macular tan to black lesions ranging from 1 mm to 1 cm in size. They do not increase in color with exposure to the sun. One or more lentigines are seen in normal individuals. Multiple ones need to be further assessed.
- **Tinea versicolor.** If a client presents with a pruritic rash on his upper trunk and shoulders and you observe areas of hypopigmentation and flat to slightly elevated brown papules and plaques that scale when they are rubbed, suspect tinea versicolor.
- **Localized brown macules.** Localized brown macules are freckles.
- **Ochronosis.** Ochronosis is a condition with poorly circumscribed blue-black macules.

Shelby, age 14, has a blister on her arm that is filled with clear fluid. It is the result of contact with a hot iron. How do you document this?

- **Bulla.** A bulla is a primary skin lesion that is filled with fluid and larger than 1 cm in diameter. It is also known as a vesicle.
- **Wheal**. A wheal is also a primary skin lesion that is irregular in size and blanched, surrounded by local edema and inflammation.
- **Cyst.** A cyst is filled with fluid and may occur in a variety of sizes.
- **Pustule.** A pustule is a superficial, elevated lesion filled with purulent fluid.

A mother complains that her newborn infant, while lying on his side, appears red on the dependent side of the body and pale on the upper side. When she picks up the baby, this coloring disappears. You explain to her about which of the following?

- **A temporary hemangioma.** Hemangiomas are birthmarks.
- **Hyperbilirubinemia.** Hyperbilirubinemia results in jaundice.
- **Harlequin sign.** The harlequin sign is a transient phenomenon in a newborn who has been lying on one side. The dependent side is red while the upper side is pale, as if a line has been drawn down the middle of the body. This disappears when the infant's position is changed.
- **Mongolian spots.** Mongolian spots are birthmarks.

Candidiasis may occur in many parts of the body. James, age 29, has it in the glans of his penis. What is your diagnosis?

- **Balanitis.** Candidiasis of the glans of the penis is balanitis.
- **Thrush.** Thrush is oral candidiasis.
- **Candidal paronychia.** Candidal paronychia involves the tissue surrounding the nail.
- **Subungual *Candida*.** Subungual *Candida* is candidiasis under the nail.

Dan, age 57, has just been given a diagnosis of herpes zoster. He asks you about exposure to others. You tell him:

- **Once he has been on the medication for a full 24 hours, he is no longer contagious.** Medication may shorten the course of the disease, but Dan should be instructed that before the rash crusts, it can release fluid that will cause an infection in others.
- **He should stay away from children and pregnant women who have not had chickenpox.** If a client has just been given a diagnosis of herpes zoster, advise the client to stay away from children and pregnant women who have not had chickenpox until crusts have formed over the blistered areas.
- **He should wait until the rash is completely gone before going out in crowds.** He does not have to wait until the rash is completely gone, just until crusts have formed.
- **He should be isolated from all persons except his wife.** Herpes zoster is contagious to people who have not had chickenpox, including his wife.

Mr. Swanson, age 67, presents to the clinic for his annual health exam. He asks you if there is anything he can do to prevent the painful, blistering sores that develop on his lip in the summertime when he plays golf. You explain to Mr. Swanson that the way to prevent the development of these lesions is to:

- **Protect the lips from sun exposure with a blocking agent, such as zinc oxide, or a lip balm that contains a broad-spectrum sunscreen.** Mr. Swanson has recurrent herpes simplex virus type 1 (HSV-1), ie, orolabial herpes. Factors that trigger reactivation include local skin trauma, sunlight exposure, and systemic changes, such as menses, fatigue, and fever. In this question, the clinician is teaching prevention. Protecting the lips from sun exposure is a preventive measure.
- **Apply acyclovir 5% cream 5 times a day for 4 days.** Application of topical antivirals or administration of oral antivirals is for the treatment of infection and is intended to reduce the healing time of primary and recurrent infections. It won't prevent further lesions.
- **Take acyclovir 500 mg 1 tablet 5 times a day for 5 days.** Application of topical antivirals or administration of oral antivirals is for the treatment of infection and is intended to reduce the healing time of primary and recurrent infections.
- **Wear a visor.** Wearing a wide-brimmed hat minimizes exposure to sunlight but may not provide adequate coverage of the lower face and lips.

Elizabeth, age 83, presents with a 2-day history of pain and burning in the left forehead. This morning she noticed a rash with erythematous papules at that site. What do you suspect?

- **Varicella.** Although herpes zoster is caused by the reactivation of latent varicella virus in the distribution of the affected nerve, varicella (chickenpox) presents with a scattered rash on both sides of the body.
- **Herpes zoster.** The rash of herpes zoster is distinctive, in that it appears on only one side of the body. Herpes zoster begins in a dermatomal distribution, most commonly in the thoracic, cervical, and lumbosacral areas, although it also occurs on the face. The classic presentation is when there is pain for 1-2 days preceding the eruption.
- **Syphilis.** A client with syphilis would present with sharply circumscribed, ham-colored papules with slight scale and lesions over the entire body, especially on the palms and soles.
- **Rubella.** Rubella (German measles) occurs in childhood. It begins on the face and rapidly (in hours) spreads down to the trunk.

A biopsy of a small, yellow-orange papulonodule on the eyelid will probably show:

- **Fragmented, calcified elastic tissue.** Fragmented, calcified elastic tissue is diagnostic of pseudoxanthoma elasticum.
- **Mature sebaceous glands.** A biopsy of sebaceous hyperplasia will show large, mature sebaceous glands.
- **Lipid-laden cells.** A biopsy of a small, yellow-orange papulonodule on the eyelid will probably show lipid-laden cells. This is a description of a noneruptive xanthoma of the eyelid (xanthelasma).
- **Endothelial swelling and an infiltrate rich in plasma cells.** A biopsy revealing endothelial swelling and a perivascular round-cell infiltrate rich in plasma cells is diagnostic of syphilis.

Deanna, age 6, was bitten by a friend's dog. Her mother asks you if the child needs antirabies treatment. You tell her:

- **"If the dog is a domestic pet that has been vaccinated, the wound should be cleaned and irrigated."** If the dog is a domestic pet that has been vaccinated, the wound should be washed thoroughly with soap and water and then treated like any other wound.
- **"Antirabies treatment must be started immediately."** Preventive treatment of suspected rabies is based on immunization through a series of vaccine and immune serum injections. Because rabies is almost always fatal, when in doubt, treat. The type of immunization determines the timing of the treatment. If immune globulin is given, half of it is infiltrated around the wound, and the remainder is administered intramuscularly. Inactivated human diploid cell rabies vaccine (HDCV) is given as a series of 5 injections beginning immediately and ending on day 28.
- **"Rabies can be contracted only through the bites of wild animals.** Because rabies may be contracted from domestic dogs and cats that have not been vaccinated, the animal should be confined for observation. A rabid animal has an initial anxiety stage, followed by a furious stage.
- **"Wait until you have observed the animal for 2 weeks to determine if it is rabid."** Domestic pets that do not appear rabid are assumed to have been vaccinated against rabies; this needs to be confirmed by the owner. Biting animals with an unknown vaccination record that appear healthy should be kept under observation for 7 to 10 days. Sick or dead animals should be examined for rabies.

During a camping trip, Jim, age 35, abruptly developed fever, headache, and joint pain. A few days after the onset of the fever, a blanchable macular rash began on his wrists and ankles and quickly spread to the palms and soles before becoming generalized. The rash is now petechial. You suspect Jim has:

- **Rocky Mountain spotted fever.** A macular rash of the wrists and ankles that is followed by spread to the palms and soles before then becoming petechial is a characteristic finding of Rocky Mountain spotted fever.
- **Flea bites.** The skin changes associated with flea bites are red to purple pruritic papules that are generally more concentrated on the legs.
- **Kawasaki disease.** The rash of Kawasaki disease is a polymorphous exanthem with vesicles or crusts. Adult cases of Kawasaki disease are rare.
- **Lyme disease.** In stage I of Lyme disease, there is the presence of flu-like symptoms and (in 60%-80% of patients) an expanding bull's-eye rash (erythema migrans).

Buddy, age 13, presents with annular lesions with scaly borders and central clearing on his trunk. What do you suspect?

- **Psoriasis.** Psoriasis has annular lesions on the elbows, knees, scalp, and nails.
- **Erythema multiforme.** Erythema multiforme has annular lesions that are mostly acral in distribution and are often associated with a recent herpes simplex infection.
- **Tinea corporis.** Psoriasis, erythema multiforme, tinea corporis, and syphilis all have lesions with annular configurations. Tinea corporis (ringworm) has ring-shaped lesions with scaly borders and central clearing or scaly patches with distinct borders on exposed skin surfaces or on the trunk.
- **Syphilis.**
  Secondary syphilis lesions are usually on the palmar, plantar, and mucous membrane surfaces.

Sandy asks what she can do for Dolores, her 90-year-old mother, who takes a bath every day and who has extremely dry skin. You respond:

- **"After bathing every day, use a generous amount of moisturizer."** Applying a moisturizing cream will help the general problem.
- **"Use a special moisturizing soap every day."** Plain water should be used rather than special soap.
- **"Your mother does not need a bath every day."** Dolores does not need a bath every day because that will exacerbate the dryness of her skin.
- **"Increase your mother's intake of fluids."** Increasing fluids will help but bathing every other day will help more.

You're teaching Mitch, age 18, about his tinea pedis. You know he doesn't understand your directions when he tells you which of the following?

- **"I should dry between my toes every day.** Clients with tinea pedis should dry between the toes every day.
- **"I should wash my socks with bleach."** Clients with tinea pedis should wash socks with bleach.
- **"I should use an antifungal powder twice a day."** Clients with tinea pedis should use an antifungal powder twice per day. Antifungal powders or sprays are preferred over creams, as fungi thrive in warm, moist environments.
- **"I should wear rubber shoes in the shower to prevent transmission to others."** Rubber- or plastic-soled shoes can harbor the fungus and therefore should not be worn. The shower should be washed with bleach to kill the fungi.

Martin, age 13, just started taking amoxicillin for otitis media. His mother said that he woke up this morning with a rash on his trunk. What is your first action?

- **Prescribe systemic antihistamines** Symptomatic relief may be obtained with systemic antihistamines.
- **Prescribe a short course of systemic steroids.** Systemic steroids may be necessary with severely symptomatic clients, although topical steroids may help clients with pruritus.
- **Stop the amoxicillin.** If you suspect a drug reaction to amoxicillin, stop the amoxicillin.
- **Continue the drug; having this reaction early in the course is normal.** This reaction is not normal. If the patient is allergic to penicillin, treatment should be discontinued.

Helen, age 39, comes to your clinic for generalized joint pain, especially in the knees and hands. She tells you that the pain is moderate, spreading, and symmetrical. She reports having had a sore throat and low-grade fever for a few days and then developing a rash, described as warm erythema of the cheeks, which lasted about 4 days before disappearing. You ask her if the rash on the cheeks included the nasolabial folds or circumoral skin, and she tells you that it did not cover these areas. Two days later, she developed a nonspecific macular eruption that preceded the joint pain. Her rash faded within 2 weeks, but she tells you that it comes and goes if she bathes in hot water or spends time in the sunlight. Your patient's symptoms are most consistent with a diagnosis of:

- **Rubella.** Rubella presents with a diffuse maculopapular rash and fever.
- **Erythema infectiosum** Erythema infectiosum (fifth disease) is distinguished by its erythematous, warm rash, which gives the appearance of "slapped cheeks," and it does not involve the nasolabial folds or the circumoral region. Women are more likely to have joint pain as a symptom of erythema infectiosum.
- **Rheumatoid arthritis.** While joint pain is a symptom of rheumatoid arthritis, the onset is not preceded by an erythematous rash of the cheeks.
- **Scarlet fever.** Although the face appears flushed, the typical presentation of scarlet fever includes a sandpaper-like rash with fine, pinhead size eruptions on an erythematous base that is more generalized and not found on the face.

EYE QUESTIONS FROM HEENT REVIEW

A 75-year-old African American male presents to your family practice office complaining of visual impairment. He has worn corrective lenses for many years but has noticed that his vision has gotten progressively worse the past 6 months. He denies pain. He states his vision is worse in both eyes in the peripheral aspects of his visual field. He also notes trouble driving at night and halos around street lights at night. You test his intraocular pressure, and it is 23 mm Hg. What is his most likely diagnosis?

- Open-angle glaucoma (This is the typical presentation of chronic, or open-angle, glaucoma)
- Angle-closure glaucoma (This is an acute, painful form of glaucoma)
- Cataracts (This is a loss of central vision)
- Macular degeneration (This also affects central vision)

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Mattie, age 64, presents with blurred vision in 1 eye and states that it felt like "a curtain came down over my eye." She doesn't have any pain or redness. What do you suspect?

- Retinal detachment (The classic sign of retinal detachment is a client stating that "a curtain came down over my eye." Typically, the person presents with blurred vision in 1 eye that becomes progressively worse, with no pain or redness)
- Acute angle-closure glaucoma (In older adults with acute angle-closure glaucoma, there is a rapid onset, with severe pain and profound visual loss. The eye is red, with a steamy cornea and a dilated pupil)

- Open-angle glaucoma (In older adults with open-angle glaucoma, there is an insidious onset, a gradual loss of peripheral vision over a period of years, and a perception of “halos” around lights)
- Cataract (With a cataract, there is blurred vision that is progressive over months or years and no pain or redness)

While doing a face, head, and neck examination on a 16-year-old patient, you note that the palpebral fissures are abnormally narrow. What are you examining?

- The nasolabial folds (The nasolabial folds are the skin creases that extend from the angle of the nose to the corners of the mouth)
- The openings between the margins of the upper and lower eyelids (The palpebral fissures are the openings between the margins of the upper and lower eyelids. Someone who appears to be squinting is said to have narrow palpebral fissures)
- The thyroid gland in relation to the trachea (The thyroid is a butterfly-shaped gland located in the front of the neck, just below the Adam’s apple; it is wrapped around the trachea)
- The distance between the trigeminal nerve branches (The trigeminal nerve is the fifth cranial nerve located within the brain. It is composed of 3 branches—ophthalmic, maxillary, and mandibular—and is primarily responsible for transmitting sensations from the face to the brain. It is also the nerve that controls the muscles used for chewing)

An 80-year-old woman comes in to the office with complaints of a rash on the left side of her face that is blistered and painful and accompanied by left-sided eye pain. The rash broke out 2 days ago, and she remembers being very tired and feeling feverish for a week before the rash appeared. On examination, the rash follows the trigeminal nerve on the left, and she has some scleral injection and tearing. You suspect herpes zoster ophthalmicus. Based on what you know to be complications of this disease, you explain to her that she needs:

- Antibiotics.
- A biopsy of the rash.
- Immediate hospitalization.
- Ophthalmological consultation (In this case, because the herpes virus seems to be along the ophthalmic branch of cranial nerve V, there is considerable risk that this client could develop permanent damage in that eye; therefore, an ophthalmological consult needs to be arranged promptly to ascertain current damage and prevent any further damage)

April, age 50, presents with soft, raised, yellow plaques on her eyelids at the inner canthi. She is concerned that they may be cancerous skin lesions. You tell her that they are probably:

- Xanthelasmas (Xanthelasmas are soft, raised, yellow plaques on the eyelids at the inner canthi. They appear frequently in women, in their 50s. Xanthelasmas occur with both high and normal lipid levels and have no pathological significance)
- Pingueculae (Pingueculae are yellowish, elevated nodules appearing on the sclera. They are caused by a thickening of the bulbar conjunctiva from prolonged exposure to the sun, wind, and dust)

- The result of arcus senilis (Arcus senilis appears as gray-white arcs or circles around the limbus and is a result of deposits of lipid material that make the cornea look cloudy)
- Actinic keratosis (Actinic keratoses are wartlike growths on the skin that occur in middle-aged or older adults and are caused by excessive exposure to the sun)

You diagnose 46-year-old Mabel with viral conjunctivitis. Your treatment should include:

- Gentamicin ophthalmic ointment (Antibiotics should not be used in clients with viral conjunctivitis)
- Ciprofloxacin ophthalmic drops (Antibiotics should not be used in clients with viral conjunctivitis)
- Supportive measures and lubricating drops (artificial tears) (Viral conjunctivitis is treated with supportive measures, including cold compresses and lubricating eye drops. Preventive measures, such as frequent handwashing, are important, as viral conjunctivitis is highly contagious)

Kevin, a 56-year-old lawyer, has throbbing pain in the left eye, an irregular pupil shape, marked photophobia, and redness around the iris. What is your initial diagnosis?

- Conjunctivitis (A client with conjunctivitis has redness more prominently at the periphery of the eye, along with tearing and itching. The client may also complain of a scratchy, burning, or gritty sensation but not pain, although photophobia may be present)
- Iritis (If a client has throbbing pain in the eye, an irregular pupil shape, marked photophobia, and redness (a deep, dull, red halo or ciliary flush) around the iris and/or cornea, suspect iritis. An immediate referral is warranted. The client may also have blurred vision)
- Subconjunctival hemorrhage (A client with subconjunctival hemorrhage presents with sudden onset of a painless, bright-red appearance on the bulbar conjunctiva that usually results from pressure exerted during coughing, sneezing, or Valsalva maneuver. Other conditions that may result in a subconjunctival hemorrhage include uncontrolled hypertension and the use of anticoagulant medication)
- Acute glaucoma (A client with acute glaucoma presents with circumcorneal redness, with the redness radiating around the iris, and a dilated pupil)

A 10-year-old male in 5th grade presents to the pediatric office with his mother complaining of itchy and red eyes for 1 day. The patient complains of watery drainage in both eyes, associated with repetitive itching. On physical exam, he has no fever or constitutional symptoms. His vision is normal, with no decrease in extraocular movements. The patient has a sibling that just started day care recently. He also has bilateral preauricular lymph nodes that are inflamed. What is the patient's diagnosis?

- Viral conjunctivitis (This is the classic presentation of viral conjunctivitis. The patient also has exposure to kids at school and a sibling with day care exposure)
- Bacterial conjunctivitis.
- Allergic conjunctivitis.
- Blepharitis (This would present with red eye and purulent discharge, especially at the eyelashes and around the eye)

Sharon, a 47-year-old bank teller, is seen by the nurse practitioner in the office for a red eye. You are trying to decide between a diagnosis of conjunctivitis and iritis. One distinguishing characteristic between the two is:

- Eye discomfort (Clients with iritis and those with conjunctivitis both complain of eye discomfort, although in iritis the pain is moderately severe, with intermittent stabbing)
- Slow progression (Both conditions generally produce a slowly progressive redness.)
- A ciliary flush (When trying to decide between a diagnosis of conjunctivitis and iritis, one distinguishing characteristic is the ciliary flush present in iritis. Photophobia is not usually present in conjunctivitis, but it is always present with iritis. Photophobia occurs with corneal inflammation, iritis, and angle-closure glaucoma)
- No change in or slightly blurred vision (Vision is normal with conjunctivitis and blurred with iritis)

Mary, age 82, presents with several eye problems. She states that her eyes are always dry and look "sunken in." What do you suspect?

- Hypothyroidism (With hyperthyroidism, the eyes appear to bulge out (exophthalmos), but in hypothyroidism, the eyes do not appear any different)
- Normal age-related changes (Dryness of the eyes and the appearance of "sunken" eyes are normal age-related changes)
- Cushing syndrome (A moon face is apparent with Cushing syndrome, and this might make the eyes appear to be sunken in, although on close examination, they are not)
- A detached retina (With a detached retina, the outward appearance is normal, but the client complains of seeing floaters or spots in the visual field and describes the sensation as like a curtain being drawn across the vision)

The most common cause of a white pupil (leukokoria or leukocoria) in a newborn is:

- A congenital cataract (The most common cause of a white pupil (leukokoria or leukocoria) in a newborn is a congenital cataract. The incidence may be as high as 1 in every 500 to 1000 live births, and there is usually a family history. Some infants require no treatment; however, in other cases surgery may be performed during the first few weeks of life)
- Retinoblastoma (Retinoblastoma, a common intraocular malignancy, is detected within the first few weeks of life and is the second most common cause of a white pupil.)
- Persistent hyperplastic primary vitreous (
  Persistent hyperplastic primary vitreous is the third most common cause of a white pupil and is a congenital developmental abnormality.)
- Retinal detachment (Retinal detachment may occur as a result of trauma or disease and only rarely occurs in infancy.)

. Which of the following statements about macular degeneration is not true?

- Macular degeneration is characterized by gradual loss of peripheral vision (This is how open-angle glaucoma is characterized. Macular degeneration is gradual loss of central vision)
- Macular degeneration is the leading cause of blindness in people younger than 60.
- Tobacco use is a risk factor for macular degeneration.
- There are 2 different types of macular degeneration: wet and dry.

When you are assessing the internal structure of the eye of your 59-year-old patient, the absence of a red reflex may indicat (When assessing the internal structure of the eye, absence of a red reflex may indicate the total opacity of the pupil because of a cataract or hemorrhage into the vitreous humor. It may also be a result of improper positioning of the ophthalmoscope)

- A cataract or hemorrhage into the vitreous humor (When assessing the internal structure of the eye, absence of a red reflex may indicate the total opacity of the pupil because of a cataract or hemorrhage into the vitreous humor. It may also be a result of improper positioning of the ophthalmoscope)
- Acute iritis (Acute iritis is noted by constriction of the pupil accompanied by pain and circumcorneal redness (ciliary flush)
- Nothing; this is a normal finding in older adults.
- Diabetes or long-standing hypertension (If areas of hemorrhage, exudate, and white patches are present when the internal structure of the eye is assessed, they are usually a result of diabetes or long-standing hypertension)

Mr. Clark, age 78, is being treated with timolol maleate (Timoptic) drops for his chronic open-angle glaucoma. While performing a new client history and physical, you note that he is taking other medications. Which medication would you be most concerned about?

- Aspirin therapy as prophylaxis for heart attack.
- Ranitidine (Zantac) for gastroesophageal reflux disease.
- Alprazolam (Xanax), an anxiolytic.
- Atenolol (Tenormin), a beta blocker for high blood pressure (If a client is taking timolol maleate (Timoptic) drops for chronic open-angle glaucoma, you should be most concerned if the client is also taking atenolol (Tenormin), a beta blocker, for high blood pressure. Because timolol maleate drops are beta-adrenergic blockers, additional beta blockers can cause worsening of congestive heart failure or reactive airway disease, as well as acute delirium)

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Regular ocular pressure testing is indicated for older adults taking:

- High-dose inhaled glucocorticoids (Although regular ocular pressure testing is indicated on a routine basis for all older adults, it is especially important for clients taking an extended regimen of high-dose inhaled glucocorticoids because prolonged continuous use increases the risk of ocular hypertension or open-angle glaucoma)
- Nonsteroidal anti-inflammatory drugs (NSAIDs).
- Angiotensin-converting enzyme (ACE) inhibitors.
- Insulin (Older adults taking insulin need to have regular eye examinations because they are diabetic and have a risk of diabetic retinopathy, not because they are taking insulin)

A 25-year-old male presents with “bleeding in my eye” for 1 day. He awoke this morning with a dark area of redness in his eye. He has no visual loss or changes. He denies constitutional symptoms, pruritus, drainage, or recent trauma. The redness presents on physical exam as a dark red area in the patient’s sclera of the right eye only and takes up less than 50% of the eye. The patient’s remaining sclera is clear and white. He also notes he was drinking alcohol last night and vomited afterward. What is the best treatment?

- Topical steroids and close follow-up with an ophthalmologist (his would be the treatment for an infectious process; however, topical steroids need to be used in the eye with care)
- Sending the patient to the emergency department for immediate ophthalmology consult (This would be the treatment for a globe rupture or acute angle-closure glaucoma)
- Reassurance that this lesion will resolve without any treatment in 2 to 4 weeks (This is the classic presentation of a subconjunctival hemorrhage. It will resolve without treatment in 2 to 4 weeks. Vomiting probably caused his hemorrhage)
- Cold compresses and frequent handwashing (This is the treatment for viral conjunctivitis)

At the clinic, you are assessing Kyle, a 4-month-old baby, for the first time and notice that both eyes are turning inward. What is this called?

- Pseudostrabismus (Pseudostrabismus has the appearance of strabismus because of the presence of epicanthic folds but is normal in young children)
- Strabismus (Strabismus, also called tropia, is the constant malalignment of the eye axes. It is likely to cause amblyopia)
- Esotropia (Esotropia is the inward turning of the eyes)
- Exotropia (Exotropia is the outward turning of the eyes)

. Mrs. Johnson, a 54-year-old accountant, presents to the office with a painful red eye without discharge. You should suspect

- Bacterial conjunctivitis (With bacterial conjunctivitis, there is purulent, thick discharge)
- Viral conjunctivitis (With viral conjunctivitis, there is usually a watery discharge)
- Allergic conjunctivitis (With allergic conjunctivitis, there is a stringy, mucoid discharge)
- Iritis (In a client with iritis, there is rarely a discharge)

Cataracts are a common occurrence in patients over 60 years of age. You counsel your patient that the best cure for cataracts is:

- Medications.
- Dietary supplements.
- Corrective lens surgery (To date, no pharmaceutical treatment proven to delay, prevent, or reverse the development of cataracts exists. The definitive management for a cataract is a surgical approach, one that removes the defective lens and replaces it with an artificial one)
- Optical devices.

A 62-year-old woman presents to your clinic with a sudden right-sided headache that is worse in her right eye. She states that her vision seems blurred, and her right pupil is dilated and slow to react. The right conjunctiva is markedly injected, and the eyeball is firm. You screen her vision and find that she is 20/30 OS and 20/30 OD. She most likely has:

- Open-angle glaucoma (With open-angle glaucoma, the onset is more insidious)
- Angle-closure glaucoma (In angle-closure glaucoma, the patient presents with a sudden onset of symptoms as described in this case. This client has a visual deficit and pain as well as fullness of the affected eye. This is a medical emergency, and she should be referred immediately because, without intervention, blindness can occur within days)
- Herpetic conjunctivitis (Herpetic conjunctivitis is generally associated with a herpetic rash, and the pain is dull in character)
- Diabetic retinopathy (Diabetic retinopathy is a complication of diabetes that affects both eyes. It is caused by damage to the blood vessels of the light-sensitive tissue at the back of the eye (ie, the retina)