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Question 1 of 111

A patient presents with hyperkeratotic plaques on the skin, especially at the scalp margin. Mycology of hair pullings = no growth. What is the likely diagnosis?

A	Psoriasis
B	Seborrhoeic dermatitis
C	*Tinea capitis*
D	Lichen simplex
E	Discoid eczema

Explanation

Psoriasis

- The diagnosis is psoriasis
- Chronic plaque psoriasis is characterised by pinkish-red hyperkeratotic plaques, which occur especially on extensor surfaces such as knees and elbows
- The lower back, ears and scalp are also commonly involved
- New plaques of psoriasis occur particularly at sites of skin trauma – the Köbner phenomenon
- Skin biopsy of psoriatic plaques reveals acanthosis and parakeratosis, reflecting increased skin turnover
- Capillary dilatation within the dermis also occurs, surrounded by a mixed neutrophilic and lymphohistiocytic perivascular infiltrate

The lack of any growth from the sample essentially rules out a diagnosis of Tinea.

Discoid eczema most commonly affects the trunk, forearms and legs, rather than the scalp.

Lichen simplex most commonly affects the vulva and can lead to intense itching.

The major differential is seborrhoeic dermatitis, but this is more associated with the formation of yellow / red scaly pimples which can begin to discharge.

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Difficulty: Average

Peer Responses

Session Progress

Responses Correct:	0
Responses Incorrect:	111
Responses Total:	111
Responses - % Correct:	0%

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Question 2 of 111

An elderly man presented with a lump on his temple that is shiny and is gradually increasing in size. What is the most likely diagnosis?

A	Basal-cell carcinoma
B	Squamous-cell carcinoma
C	Seborrhoeic wart
D	Lentigo maligna
E	Amelanotic melanoma

Explanation

Basal-cell carcinoma

- Basal-cell carcinomas are the most common malignant skin tumour and are related to excessive sun exposure
- They are common later in life and may present as a slow-growing nodule or papule
- Basal-cell carcinomas grow slowly and may cause local erosion, but they almost never metastasise

Management

- Treatment is with surgical excision, although radiotherapy may be used for large superficial lesions
- Very superficial small basal-cell carcinomas may be managed with cryotherapy, although regular follow-up to examine for recurrence is recommended

Other notes

- Squamous-cell carcinomas tend to have a keratinised or ulcerated surface, and seborrhoeic warts have a papillomatous, pigmented surface appearance

- Lentigo maligna arises in a pre-existing freckle
- Amelanotic melanomas have a lack of pigment vs melanotic melanomas, but still have the characteristic irregular border and a faint line of pigmentation around their edge

5189

Next Question

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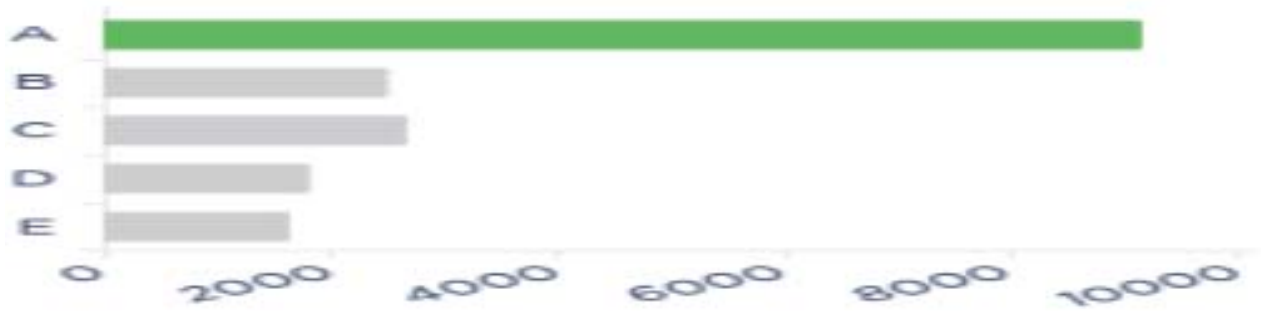
Difficulty: Average

Peer Responses



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Responses - % Correct:	0%

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Question 3 of 111

A 28-year-old nurse from a nursing home presents to the clinic with a severe rash affecting her hands. It is a severely pruritic rash with multiple papules and vesicles against a background of erythema. There are a number of areas where she has scratched her hands to the point of bleeding. The table below contains the investigation results.

Hb	13.1 g/dl
WCC	5.6×10^9/litre
PLT	300×10^9/litre
Na^+	141 mmol/litre
K^+	4.8 mmol/litre
Creatinine	100 µmol/litre
Fungal cultures	negative
Patch testing	positive for house dust, cats, latex, nickel

Which one of the following would be the most appropriate long-term management in this case?

A Topical corticosteroid cream

B Topical antihistamine cream

C Oral corticosteroids

D Topical tacrolimus

E Switch to nitrile gloves

Explanation

Latex allergy

✚ This nurse unfortunately has developed a contact allergy to latex, despite the fact that

topical corticosteroids, oral corticosteroids and topical tacrolimus may all impact on the condition

- withdrawal of the latex challenge is the intervention of choice

- Topical antihistamines may themselves lead to skin hypersensitivity
- As such they should be avoided
- In the long term latex re-challenge may lead to increasingly severe allergic reactions, and several prosecutions have occurred within the context of the NHS over latex allergy

20457

Next Question

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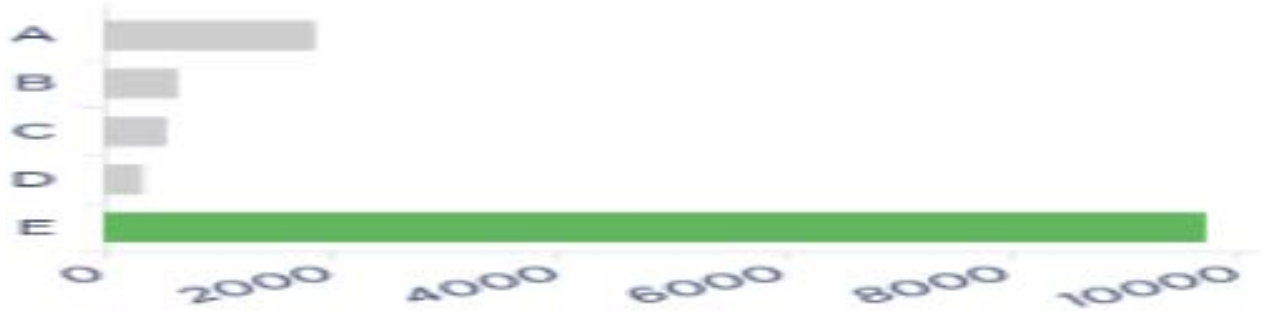
Difficulty: Easy

Peer Responses



Session Progress

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Responses Total:	111
Responses - % Correct:	0%

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Question 4 of 111

A 22-year-old woman presents with unsightly skin over her chest and scapular area. She noticed it while recently sunbathing on holiday in Spain. On examination she has a number of greasy brown papules on her chest and scapular area. Which diagnosis fits best with this clinical picture?

A Darier disease

B Pityriasis rosea

C Pityriasis rubra pilaris

D Lichen planus

E Lichen aureus

Explanation

Darier disease

- Darier disease is a genetic skin condition that has an autosomal-dominant mode of inheritance
- It is characterised by abnormal keratinisation mainly around hair follicles, resulting in a greasy, red–brown papular eruption
- The rash most commonly presents on the chest and scapular area, and is aggravated by sunburn or tanning
- Small pits may occur on the skin of the palm of the hand, and nail abnormalities may also be associated
- The rash may occur as an abnormal reaction to local skin infection, though the exact pathological trigger is unknown
- Salicylic acid preparations were the mainstay of treatment in the past, but these have now been largely replaced by retinoids
- Of course, in this age group, adequate contraception is essential in patients taking retinoic acid preparations

3344

Next Question

Previous Question Tag Question Feedback End Review

Difficulty: Difficult

Peer Responses

Session Progress

Responses Correct:	0
Responses Incorrect:	111
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Responses - % Correct:	0%

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Question 5 of 111

A 25-year-old man gives a 2-week history of painful joints affecting his lower limbs. He returned from a holiday in south-east Asia 3 weeks ago. During this holiday he had developed loose bowel motions followed by eye irritation, for which he had consulted a local doctor. He has a psoriasiform rash on his lower limbs and soles. What is the most likely diagnosis?

A	Lichen planus
B	Guttate psoriasis
C	Reactive arthritis
D	Mastocytosis
E	Porphyria

Explanation

Reactive arthritis

- Reactive arthritis is characterised by non-suppurative polyarthritis following a lower urogenital or enteric infection
- It usually affects young men carrying the HLA-B27 antigen
- Inflammatory eye disease and mucocutaneous manifestations are common
- *Chlamydia trachomatis*, *Ureaplasma spp*, *Shigella* spp and other organisms may be responsible
- Conjunctivitis occurs early and may be followed by iritis
- The skin lesions are psoriasiform (keratoderma blennorrhagicum), but erosive lesions may affect the penis (circinate balanitis) or mouth
- Rare complications include heart block, aortic incompetence and pericarditis

Other notes

- Guttate psoriasis occurs acutely and is usually precipitated by an upper respiratory infection, usually occurring in young adults and children

- Lichen planus is a common mucocutaneous disorder characterised by a pruritic papular eruption
- Systemic macrocytosis is associated with histamine release leading to itchy skin rashes, and signs of systemic allergic reaction
- Acute intermittent porphyria is associated with a more prolonged history and is characterised by recurrent episodes of anxiety, hypertension, abdominal pain

2487

Next Question

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Difficulty: Easy

Peer Responses

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Responses Correct:	0
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Question 6 of 111

A 50-year-man presents with onycholysis. He is already being followed up for another chronic problem. Which is the most likely underlying cause for his current presentation?

A Alopecia areata

B Lichen planus

C Systemic lupus erythematosus

D Hypoproteinaemia

E Thyrotoxicosis

Explanation

Thyrotoxicosis

- Thyrotoxicosis is characterised by clubbing (thyroid acropachy) and distal onycholysis
- Nail pitting, trachyonychia (roughness), nail thinning, nail dystrophy, and loss of nails occur in alopecia areata and lichen planus
- Systemic lupus erythematosus presents with nail fold splinter haemorrhages and abnormal nailfold capillaries
- Chronic hypoproteinaemia presents with white nails

3149

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Difficulty: Average

Peer Responses

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Responses Correct:	0
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Responses Total:	111
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Question 7 of 111

A 14-year-old girl presents with moderate acne and pustules affecting the face, back and chest. What is the most appropriate treatment?

A Topical tretinoin

B Oral tetracycline for three months

C Erythromycin

D Oral isotretinoin

E UVB phototherapy

Explanation

Treatment of acne

- The answer is oral tetracycline for three months
- This patient has moderate acne and is therefore suitable for second-line therapy
- First-line therapy for acne involves the use of topical antibiotics such as tetracyclines, keratolytics or topical retinoids
- Second-line therapy involves a 3–4 month course of low-dose antibiotics, such as tetracyclines or erythromycin if the oral tetracycline is unsuitable or poorly tolerated, Dianette (if there is no contraindication) or UVB phototherapy (although this is rarely used now)
- Third-line therapy involves the use of oral retinoids, although these are prescribed only by specialists in dermatology and carry high risk of teratogenicity

5190

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Difficulty: Average

Peer Responses

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Responses Correct:	0
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Responses Total:	111
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Question 8 of 111

A 30-year-old woman, back from a trip to Thailand, presents with sunburn on her back. What is the main type of damage caused by excessive ultraviolet radiation on cells?

A Inhibition of DNA synthesis

B Formation of pyrimidine dimers

C Ionisation

D DNA fragmentation

E Inhibition of synthesis of DNA polymerase

Explanation

Effects of ultraviolet radiation

- Exposure to ultraviolet B light produces phototoxic and/or photosensitive reactions
- The damage caused is due to the formation of pyrimidine dimers
- These prevent the enzyme DNA polymerase from replicating the DNA strand beyond the site of dimer formation

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Difficulty: Difficult

Peer Responses

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Responses Correct:	0
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Responses - % Correct:	0%

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Question 9 of 111

A 55-year-old woman had been gardening on a warm spring day. In the evening she noticed erythema and blistering over the dorsum of her hands, face and neck. She has a background of Type II diabetes, angina and rosacea.

Which of the following drugs is most likely to have induced photosensitivity?

A	Aspirin
B	Bisoprolol
C	Doxycycline
D	Isosorbide mononitrate
E	Metformin

Explanation

The answer is Doxycycline –

- A wide variety of drugs can cause photosensitivity (i.e. burning after an unusually short exposure to ultraviolet (UV) light).
- Doxycycline is a well-recognised culprit and other tetracyclines can also be involved.
- Other photosensitising agents include:
  - NSAIDs
  - Retinoids
  - Diuretics (thiazide and loop)
  - Other cardiovascular drugs (eg amiodarone, diltiazem, enalapril, quinidine)
  - Sulfonylurea drugs
  - Phenothiazines.
- Treatment includes ideally stopping the causative agent and good sun protection measures.

Aspirin (Option A) is incorrect. Aspirin has no association with photosensitivity.

Bisoprolol (Option B) is incorrect. Bisoprolol has no association with photosensitivity.

Isosorbide mononitrate (Option D) is incorrect. Isosorbide mononitrate has no association with photosensitivity.

Metformin (Option E) is incorrect. There is one report of three cases of photosensitivity induced by metformin, but there is certainly no strong link.

46405

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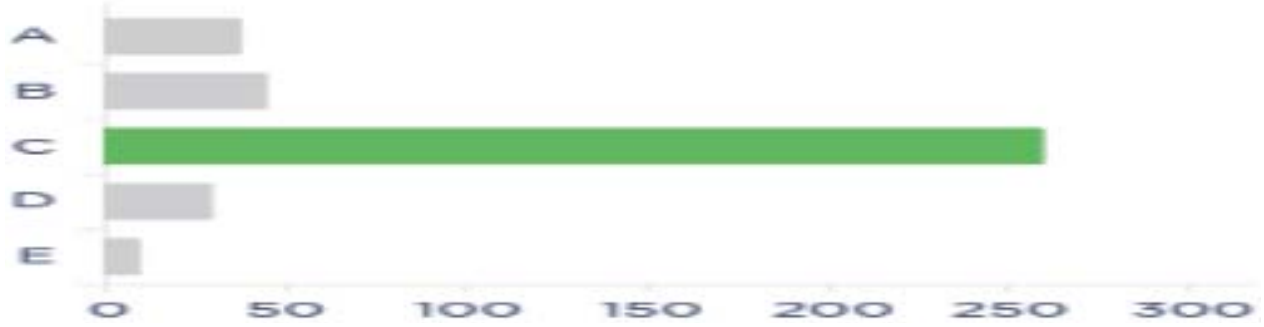
Difficulty: Average

Peer Responses



Session Progress

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Responses - % Correct:	0%

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Question 10 of 111

A 25-year-old man, known to have suffered from type 1 diabetes mellitus for over 10 years, presents with a rash on his shins. The endocrinologist makes a diagnosis of necrobiosis lipoidica. Which of the following best describes necrobiosis lipoidica?

A It is commonly seen in males

B It most commonly occurs on the knuckles

C It is treated with oral steroids

D It is secondary to a fungal infection

E Low-dose aspirin helps healing

Explanation

Necrobiosis lipoidica

- Necrobiosis lipoidica is an unusual complication of diabetes mellitus, but it may also occur in non-diabetic patients
- It is thought to be owing to small-vessel damage leading to partial necrosis of dermal collagen and connective tissue, and a histiocytic cellular response
- It is more commonly seen in young or middle-aged females
- The skin over the shins is commonly affected and the disease presents as erythematous plaques that gradually develop a brown waxy discoloration

Treatment

- Treatment is with support bandaging
- Low-dose aspirin may help the healing of such lesions

2496

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Difficulty: Average

Peer Responses

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Responses Correct:	0
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Responses - % Correct:	0%

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Question 11 of 111

A 25-year-old man has returned from a 2-week holiday in Kenya. He gives a history of painful penile ulcers and swelling in the right inguinal area. While on holiday, he had unprotected sex with a local girl. Examination shows multiple ulcers on the prepuce and frenulum. He also has suppurating lymphadenopathy in the right groin. Which one of the following is the most likely diagnosis?

A Granuloma inguinale

B Chancroid

C Genital herpes

D Syphilis

E Lymphogranuloma venereum

Explanation

Chancroid

- Chancroid is caused by *Haemophilus ducreyi* and is thought to be the commonest cause of genital ulceration in parts of Africa, with an incubation period of 4–7 days
- An initial erythematous papule breaks down into a painful ulcer, and several ulcers merge to form giant serpiginous lesions
- Ulcers are commonly seen on the prepuce and frenulum in men, and the vaginal entrance and perineum in women
- Inguinal lymphadenopathy develops, usually unilaterally, and this can suppurate
- Diagnosis is by isolating the organism from swabs taken from the lesion and culture on chocolate based media
- Treatment is with single dose Azithromycin, IM Ceftriaxone, or a 7-day course of Erythromycin
- The candidate should be drawn to chancroid versus the other potential options because of the geographical location of the infection and the symptoms seen

2002

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Difficulty: Difficult

Peer Responses

Session Progress

Responses Correct:	0
Responses Incorrect:	111
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Question 12 of 111

A 17-year-old youth presents with a purpuric rash on his buttocks and legs. There is joint pain and one vomit containing coffee grounds. Blood testing reveals mild eosinophilia and a small rise in IgA levels. Urine testing reveals microscopic haematuria. What diagnosis fits best with this clinical picture?

A	Traumatic injury
B	Thrombotic thrombocytopenic purpura
C	Idiopathic thrombocytopenic purpura
D	Polyarteritis nodosa
E	Henoch–Schönlein purpura

Explanation

Henoch–Schönlein purpura

- Henoch–Schönlein purpura presents with purpura in dependent areas (eg buttocks and lower legs)
- Although it mostly occurs in children between 4 and 15 years of age, it may be seen in slightly older individuals
- A 2:1 male to female ratio exists
- Postulated aetiology is an exaggerated antigen–antibody reaction with IgA deposition
- Antigen triggers may include
  - drugs
  - foods
  - immunisation
  - an upper respiratory tract infection
- If this were TTP/HUS then we would be expected to at least be given some history of exposure to an infectious agent, or provided with an abnormal creatinine value
- An acute presentation of PAN in this age group would be highly unusual

Clinical findings

- There may be no specific abnormalities on blood testing, although IgA is elevated in 50% of cases, with a leucocytosis or eosinophilia
- Joint pain and renal involvement (leading to microscopic haematuria) are common, as are minor GI bleeds

Treatment and recovery

- Prednisolone is given for severe GI or renal involvement, although properly conducted efficacy studies of steroids are hard to come by
- Usually recovery occurs within 4 weeks, but severe renal disease may occur in 5% of patients

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Difficulty: Easy

Peer Responses

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Question 13 of 111

A 54-year-old woman who works outdoors as a building surveyor has noticed an increasingly troublesome, red scaly rash affecting her face, scalp, neck and hands. It presents as a series of red scaly areas. She is concerned that the areas affecting her scalp are causing bald patches in her hair. Antinuclear antibodies are negative. Some earlier lesions are now scarring, and showing change in pigmentation. What is the diagnosis that fits best with this clinical picture?

A	Chronic discoid lupus erythematosus
B	Systemic lupus erythematosus
C	Psoriasis
D	Ringworm
E	Eczema

Explanation

Chronic discoid lupus erythematosus

- Chronic discoid lupus erythematosus (CDLE) is a chronic, relapsing and remitting, cutaneous disease, which affects light-exposed areas and is characterised by well-demarcated plaques of scaling erythema that progress to atrophy
- It characteristically affects the face, neck, scalp and hands of sufferers; the female to male ratio is 2:1
- The plaques eventually heal with scarring, pigment change (tending to look darker on Caucasian skin and lighter on black skin), and telangiectasia
- Scalp lesions destroy the hair bulbs and lead to areas of alopecia
- A small proportion of patients have circulating antinuclear antibodies and this may indicate a risk of progression to systemic lupus

Treatment

- Treatment is with topical sun-block and steroid creams

✚ Occasionally, systemic therapy is required, antimalarials such as chloroquine are said to be effective, but their chronic use carries a risk of retinopathy

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Difficulty: Average

Peer Responses

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Responses Incorrect:	111
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Question 14 of 111

A 23-year-old woman has acne vulgaris with scarring. She has only used over-the-counter wash products to date. She is 20 weeks' pregnant.

Which of the following treatment plans is most appropriate?

A	Benzoyl peroxide and clindamycin gel for 3–6 months
B	Moderate potency topical steroid in 1-week bursts
C	Oral doxycycline for 3–6 months
D	Oral isotretinoin for 3 months
E	Retinoid cream until the end of the pregnancy

Explanation

The answer is Benzoyl peroxide and clindamycin gel for 3–6 months –

The combination of benzoyl peroxide and topical clindamycin is commonly used to treat acne; there is no evidence that either constituent leads to adverse effects in pregnancy.

- Acne vulgaris is a chronic disorder of the pilosebaceous unit.
- It most commonly affects teenagers, but not infrequently occurs in older adults.
- Key pathophysiological mechanisms include an increase in sebum production, proliferation of *Propionibacterium acnes*, a commensal bacterium that resides in the hair follicle, and comedone formation (blockage of the pilosebaceous duct); these all contribute to inflammation.
- Clinical features of acne include papules, pustules, nodules, and open and closed comedones.
- Treatments target different aspects of the pathogenesis, but treating acne in pregnancy is difficult as most options are teratogenic.

Moderate potency topical steroid in 1-week bursts (Option B) is incorrect. Topical steroids are

not an appropriate treatment for acne, whether or not the patient is pregnant. Indeed, more potent steroids can precipitate acne.

Oral doxycycline for 3–6 months (Option C) is incorrect. Oral doxycycline for 3–6 months would be reasonable if the patient was not pregnant; however, tetracycline drugs are associated with foetal bone and tooth abnormalities so are contra-indicated in pregnancy.

Oral isotretinoin for 3 months (Option D) is incorrect. Oral isotretinoin is the most effective treatment for acne, but is highly teratogenic. Women of child-bearing potential who are to receive the drug are usually enrolled in a pregnancy prevention programme.

Retinoid cream until the end of the pregnancy (Option E) is incorrect. As oral retinoids are such potent teratogens and systemic absorption of topical retinoids is potentially possible, the latter are also contra-indicated in pregnancy.

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Difficulty: Average

Peer Responses

Session Progress

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Question 15 of 111

A 55-year-old woman has developed slightly tender plum-coloured plaques on the backs of her hands. She is feverish, unwell and known to have myelodysplastic syndrome. Her full blood count reveals neutrophilia. Which one of the following is the most likely diagnosis?

A Erythema elevatum diutinum

B Erythema nodosum

C Nodular vasculitis

D Pyoderma gangrenosum

E Sweet syndrome

Explanation

Sweet syndrome

- All of the above can present as tender noduloplaques
- However, Sweet syndrome has a characteristic plum colour and 50% of patients with this syndrome have haematological disorders and peripheral neutrophilia
- Skin biopsy reveals neutrophils and nuclear debris in the dermis

3151

Next Question

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Difficulty: Average

Peer Responses

Session Progress

Responses Correct:	0
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Question 16 of 111

A 28-year-old woman presents to the dermatology clinic with two well-demarcated bald areas on her scalp. She has a past history of autoimmune hypothyroidism, but a recent TSH measurement was within the normal range on thyroxine therapy. In addition, she has type 1 diabetes. On examination the affected areas of scalp look normal, and there are no signs of inflammation or scarring. Hairs removed from the margin of the bald area look like 'club hairs'. Which diagnosis fits best with this clinical picture?

A	Trichotillomania
B	Alopecia areata
C	Fungal scalp infection
D	Drug-induced alopecia
E	Telogen effluvium

Explanation

Alopecia areata

Characteristics

- Alopecia is characterised by sudden hair loss in one or multiple body sites
- Alopecia is common and accounts for 2% of dermatology outpatient referrals
- Most cases occur in children or young adults and there may be increased frequency in those with a history of atopy or those with a history of autoimmune disease
- Complete loss of scalp hair is described as 'alopecia totalis', complete loss of scalp and body hair is described as 'alopecia universalis'
- The characteristic appearance is defined by the absence of inflammation, scarring or scaling, the latter is the main sign used to differentiate the condition from other causes of hair loss such as fungal infection

Clinical findings

- Scalp biopsy is rarely necessary, but if done it reveals hair bulbs sitting high in the dermis, usually surrounded by lymphoid cells.
- Most cases are self-limiting and resolve over time; persistent alopecia, however, carries a poor long-term outlook for hair regrowth

Drug causes

- Common drug causes of alopecia include
  - cytotoxic agents
  - warfarin
  - carbimazole
  - propylthiouracil

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Difficulty: Easy

Peer Responses

Session Progress

Responses Correct:	0
Responses Incorrect:	111
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Responses - % Correct:	0%

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Question 17 of 111

A 46-year-old man complains of facial redness. Examination shows macular erythema with prominent telangiectasia over the cheeks and nose. He also has papules and pustules, on the nose and chin.

What is the most likely diagnosis?

A	Acne vulgaris
B	Allergic contact dermatitis
C	Rosacea
D	Seborrhoeic dermatitis
E	Systemic lupus erythematosus

Explanation

The answer is Rosacea –

- Rosacea gives rise to an acneiform, papulopustular eruption mainly on the central face (medial cheeks, nose, chin, glabellum); there is also often facial erythema because of increased lability and reactivity of the facial vasculature, the cause of which is unknown; patients often complain of flushing.
- There may be rhinophyma, characterised by hypertrophy of the nasal skin leading to a bulbous appearance.
- Ocular rosacea often co-exists, which includes conjunctivitis, blepharitis and keratitis.
- Women are more commonly affected, although it is men who tend to develop rhinophyma.
- Rosacea is not a sign of alcohol excess.

Exacerbation

- The erythema may be exacerbated by:
  - Sunlight
  - Heat
  - Alcohol
  - Consumption of spicy foods.

Distinguishing features

- Rosacea can be distinguished from acne by:
  - The absence of comedones
  - The distribution of the rash (rosacea is almost always confined to the face)
  - Lack of scarring, which is very unusual in rosacea
  - The effect of sunlight (which often brings about an improvement in acne)
  - Age (acne is relatively rare in patients over the age of 30 and rosacea becomes more common around the age of 40).

Treatment

- Patients with rosacea should be advised to avoid factors that provoke facial flushing; treatment is with topical metronidazole or azelaic acid; oral tetracycline antibiotics are usually effective, although resistant cases are sometimes treated with low-dose oral isotretinoin.
- Topical steroids should be avoided as their withdrawal leads to rebound exacerbation.

Acne vulgaris (Option A) is incorrect.

- Rosacea can be distinguished from acne by:
  - The absence of comedones
  - The distribution of the rash (rosacea is almost always confined to the face)
  - Lack of scarring, which is very unusual in rosacea
  - The effect of sunlight (which often brings about an improvement in acne)
  - Age (acne is relatively rare in patients over the age of 30 and rosacea becomes more common around the age of 40).

Allergic contact dermatitis (Option B) is incorrect. Allergic contact dermatitis may present with facial redness, but itching, dryness and scaling are prominent; papules and pustules are not seen.

Seborrhoeic dermatitis (Option D) is incorrect. Seborrhoeic dermatitis (eczema) leads to mild erythema with rather greasy scaling; it commonly affects the scalp, eyebrows and nasolabial folds. Pustules are not a feature. It may co-exist with rosacea, complicating the

diagnosis and treatment.

Systemic lupus erythematosus (SLE) (Option E) is incorrect. The butterfly rash of SLE tends to be infiltrated and thus not macular. Papules and pustules are not a feature of SLE.

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Difficulty: Average

Peer Responses

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Question 18 of 111

You review a 38-year-old woman who has been admitted to the Oncology Ward having suffered a generalised tonic-clonic seizure. She is known to have a history of metastatic malignant melanoma with extensive hepatic metastases, and a contrast CT scan on admission has demonstrated a 2cm intracerebral metastasis on the left hand side. Analysis of biopsy specimens from cutaneous metastases suggests that the melanoma is BRAF mutation positive. Previously she has enjoyed a reasonable functional status, continuing to hold down a job in a supermarket, and has a 4-year-old child.

Which of the following is the best targeted next intervention?

A	Cisplatin
B	Dabrafenib
C	Dacarbazine
D	IL-2
E	Ipilimumab

Explanation

The answer is Dabrafenib -

Dabrafenib is a BRAF inhibitor, which is of value in the treatment of advanced metastatic melanoma. It penetrates the blood-brain barrier and is therefore potentially useful in this patient with symptomatic cerebral metastases. It has been shown in the phase III program for metastatic melanoma to be superior to dacarbazine. Ipilimumab binds to the CTLA-4 T cell receptor, enhances the T cell response to metastases, and is potentially of value in addition to BRAF inhibition.

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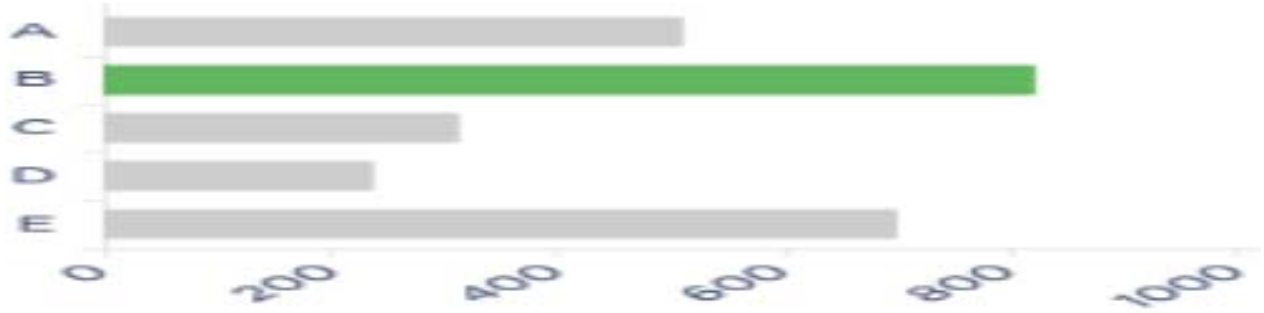
Difficulty: Difficult

Peer Responses



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Question 19 of 111

A 44-year-old man presents complaining of vague joint pains for over 2 months. He also has annular, erythematous plaques on his lower limbs. According to his partner he has suffered two episodes of unresponsiveness within the last 3 weeks, from which he recovered spontaneously. He is a salesman in a sports shop and had been to the USA 12 months ago with friends on a 3-month long camping holiday. He is a non-smoker and does not drink alcohol. Which one of the following tests is most likely to establish the diagnosis?

A Cardiac enzymes

B Autoimmune screen

C Serology

D Holter ECG

E Skin biopsy

Explanation

Lyme disease

- This patient has Lyme disease. This is caused by a spirochaete, *Borrelia burgdorferi*, which is transmitted by the bite of an ixodid tick
- Its cutaneous manifestation is called ‘erythema chronicum migrans’, a slowly spreading annular, indurated erythematous plaque usually on the limbs
- Neurological or cardiac problems such as arrhythmias, heart block, etc may develop
- Diagnosis is made by detecting the antibody to *B. burgdorferi* in serum and cerebrospinal fluid
- Lyme disease responds to high-dose penicillin or tetracycline for 10 days

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Difficulty: Average

Peer Responses

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Question 20 of 111

A 30-year-old female on returning from Brazil developed a non-healing ulcer on the left ankle. She had spent 2 weeks camping in the jungle where she remembers being bitten by flies.

Which one of the following statements is the most likely?

A	Cutaneous leishmaniasis frequently precedes kala azar
B	Cutaneous leishmaniasis usually responds to oral penicillin
C	Leishmaniasis is transmitted by the bot fly
D	Lesions of leishmaniasis acquired in the Americas mostly heal without treatment after a few months
E	Mosquito nets are important in the prevention of leishmaniasis

Explanation

The answer is Lesions of leishmaniasis acquired in the Americas mostly heal without treatment after a few months –

- Leishmaniasis is caused the protozoan species *Leishmania* and is transmitted by female sandflies.
- Sandflies are only 1.5–3 mm in length, and tend to feed at dawn and dusk.
- Their small size allows them to pass through standard mosquito nets: measures to prevent bites and thereby *Leishmania* infection include covering up with clothing, using insect repellents, and spraying of sleeping areas and clothing with permethrin.
- Manifestations of *Leishmania* infection depend on the species and the host response.
- Cutaneous leishmaniasis usually appears 2 weeks to 6 months after infection, but sometimes longer.
- Lesions are typically painless and most will resolve spontaneously to leave atrophic

scarring.

- Treatment may be instituted to minimise complications such as scarring, superadded infection, and, in American leishmaniasis, the risk of later mucocutaneous disease.
- Antimonials are usually preferred: sodium stibogluconate may be administered intralesionally, or by intramuscular or intravenous injection.
- Cutaneous leishmaniasis does not progress to kala azar (visceral disease).

Cutaneous leishmaniasis frequently precedes kala azar (Option A) is incorrect. Kala azar (visceral leishmaniasis) is a systemic infection which affects the liver, spleen and bone marrow. It ranges in severity and can be life-threatening, particularly in immunosuppressed or malnourished individuals. It is characterised by fever, weight loss, hepatosplenomegaly, pancytopenia and hypogammablobulinaemia.

Cutaneous leishmaniasis usually responds to oral penicillin (Option B) is incorrect. Penicillin is not an effective treatment for leishmaniasis, which is caused by a protozoan rather than a bacterium.

Leishmaniasis is transmitted by the bot fly (Option C) is incorrect. The bot fly (*Dermatobia hominis*) is a cause of cutaneous myiasis (infestation by the larvae of various types of fly). It does occur in Central and South America, but is not related to leishmaniasis.

Mosquito nets are important in the prevention of leishmaniasis (Option E) is incorrect. As outlined, standard mosquito nets are not an effective barrier against the sandfly.

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Question 21 of 111

An elderly woman is referred with mildly itchy vulval skin. Examination shows an atrophic white plaque affecting the vulva. There is a similar plaque on her abdomen. Which one of the following is the most likely diagnosis?

A Lichen planus

B Lichen sclerosus

C Lichen simplex

D Morphea

E Vitiligo

Explanation

The patient with vulval itch

- The vulva would be an unusual site for morphea
- Vitiligo is not generally an atrophic condition
- Lichen planus and lichen simplex tend to be very itchy

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Difficulty: Average

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Question 22 of 111

A 20-year-old woman known to suffer from acne vulgaris has been started on isotretinoin. Which one of the following statements best applies to treatment with isotretinoin?

A	It is contraindicated in patients with renal artery stenosis
B	It can cause hirsutism
C	It can cause hyperkalaemia and hence electrolytes should be checked every month
D	Pregnancy should be avoided during and 1 month after treatment
E	It is likely to cause haemoptysis

Explanation

Isotretinoin treatment

- Isotretinoin is indicated for the treatment of severe inflammatory acne
- However, it causes marked dryness of the skin and mucous membranes, especially the lips, and can result in minor nosebleeds
- Dry mouth can potentially be managed with chewing sugar free gum or artificial saliva. Dry lips or dryness of the nasal mucosa can be managed with moisturisers such as Vaseline preparations
- Due to its teratogenicity, pregnancy must be excluded prior to its initiation and during treatment, as well as for 1 month after treatment
- Other side-effects are paronychia, meatitis in men and contact lens problems due to dryness of the eyes
- Abnormalities of serum lipids and liver function tests should be excluded before treatment, and sought after 4 and, perhaps, 8 weeks of treatment

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Difficulty: Easy

Peer Responses

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Question 23 of 111

A 23-year-old woman presents with an intensely itchy, bullous skin rash, particularly affecting her scalp and the extensor surfaces, including buttocks, elbows and knees. She has had the rash for some time, and her GP arranges for her to have a biopsy. The table below contains the investigation results.

Hb	12.1 g/dl
WCC	7.2×10^9/litre
PLT	180×10^9/litre
Na^+	139 mmol/litre
K^+	4.8 mmol/litre
Creatinine	110 µmol/litre
Albumin	34 g/litre
Skin biopsy:	Sub-epidermal blister formation, inflammatory cells grouped within the dermal papillae, IgA visualised within the dermal papillae on direct immunofluorescence

Which one of the following is the most appropriate therapy for her?

A Low-protein diet

B Dairy-free diet

C Elemental diet

D Low-fat diet

E Gluten-free diet

Explanation

Dermatitis herpetiformis and a gluten-free diet

- The skin biopsy picture seen here and her history is very suspicious of dermatitis herpetiformis
- The mainstay of management of dermatitis herpetiformis is the adherence to a gluten-free diet
- In patients whose symptoms fail to resolve, dapsone is the treatment of choice, although sulphpyridine or topical corticosteroids may be an option for patients who are dapsone intolerant
- Tissue transglutamase, and anti-endomyseal antibody testing should be undertaken, as this patient may well have undiagnosed underlying coeliac disease

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Difficulty: Easy

Peer Responses

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Question 24 of 111

A 6-month-old baby appears to have experienced a fit with jerking of one arm followed by generalised shaking. A macular erythematous lesion under the right lower eyelid, which has not changed in size or appearance, has been present since birth.

What is the most likely diagnosis?

A	Infantile haemangioma
B	Klippel–Trénaunay syndrome
C	Sturge–Weber syndrome
D	Tuberous sclerosis
E	Type 1 neurofibromatosis

Explanation

The answer is Sturge–Weber syndrome –

- The vascular lesion described in the scenario is a port-wine stain (PWS) and, together with a fit, suggests Sturge–Weber syndrome.
- PWS is an uncommon benign capillary proliferation; most are present at birth.
- It is usually unilateral, with a sharp midline cut-off, and may affect the face, trunk or limbs.
- It usually begins as a red or purple macule but can darken and thicken over time; it grows with the child, but does not extend in terms of distribution.
- PWS in the distribution of the ophthalmic or maxillary branches of the trigeminal nerve may indicate Sturge–Weber syndrome.
- This is a sporadic condition which is associated with neurological and various ocular abnormalities, together with a PWS.
- Leptomeningeal angiomata should be sought on MRI.
- Neurological features include epilepsy, developmental delay or mental retardation, and stroke-like episodes.

- Ocular manifestations include glaucoma, buphthalmos and vascular lesions of the conjunctiva, episclera, choroid and retina.
- Skull imaging may demonstrate intracranial ‘tramline’ calcification.

Infantile haemangioma (Option A) is incorrect. These usually develop shortly after birth, mostly on the head or neck. They undergo a rapid proliferative phase, generally over a few months, followed by a slow phase of involution (3–10 years). Treatment may be indicated if the lesion threatens function. Large facial lesions may be associated with other abnormalities including coarctation of the aorta, posterior fossa malformations and ocular defects.

Klippel–Trénaunay syndrome (Option B) is incorrect. This sporadic condition is characterised by a PWS on a limb, with associated soft tissue and bony overgrowth. Venous malformations also occur.

Tuberous sclerosis (Option D) is incorrect. Tuberous sclerosis is an autosomal-dominant disorder characterised by hamartomas located throughout the body, often prominently involving the central nervous system and skin. Neurological features including seizures may occur, but cutaneous signs comprise periungual fibromata, facial angiofibromata shagreen patches (collagen naevi) and ash-leaf macules, rather than vascular lesions.

Type 1 neurofibromatosis (Option E) is incorrect. Neurofibromatosis is another example of a neurocutaneous syndrome (phacodermatosis). This is an autosomal-dominant disorder characterised by neurofibromata affecting the nervous system and skin. Epilepsy secondary to intracranial lesions may occur, but vascular lesions are not a feature.

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Difficulty: Average

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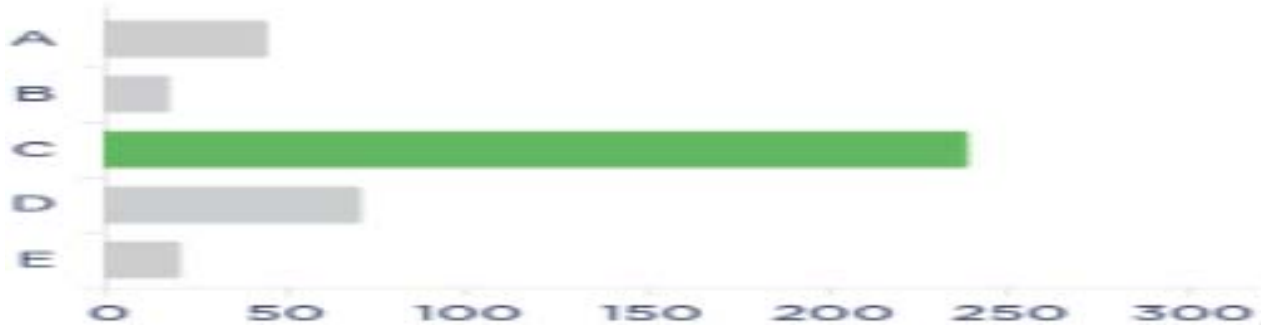

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Question 25 of 111

A 42-year-old man with a history of ulcerative colitis attends the gastroenterology clinic for review. He has noticed a deep ulcerating lesion on his leg and is concerned as to what it may be. On examination he has a deep ulcer on the left lower leg which has a violet border. The table below contains the investigation results.

Hb	12.0 g/dl
WCC	5.1×10^9/litre
PLT	234×10^9/litre
Na^+	141 mmol/litre
K^+	4.3 mmol/litre
Creatinine	105 µmol/litre
ESR	15 mm/hr

Which one of the following would be the most appropriate investigation to confirm the diagnosis?

A Autoimmune profile

B Biopsy from the ulcer margin, microscopy and culture from the ulcerated tissue

C Angiography and venous Doppler studies

D Fasting plasma glucose

E Chest X-ray

Explanation

Pyoderma gangrenosum

- This patient has a clinical history which is suggestive of pyoderma gangrenosum, a condition that may be associated with

- vasculitis
- haematological malignancy
- inflammatory bowel disease

- Biopsy of the ulcerated tissue reveals intense neutrophilic infiltration, haemorrhage and necrosis of the overlying epidermis
- Culture is important to rule out infection as a cause of the presentation
- Treatment includes topical corticosteroids, with oral corticosteroids and ciclosporin being alternative additional agents

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Question 26 of 111

A 24-year-old woman presents to the Emergency Department in her 32nd week of pregnancy. She is suffering from a painful, itchy blistering rash across her lower abdomen which she says began all of a sudden. Her pregnancy has been uneventful so far. Examination reveals erythema over the lower abdomen with a number of tense bullae. Some of the blisters have been de-roofed to reveal raw areas of skin underneath.

Investigations;

Hb	12.1 g/dl
WCC	8.1 $x10^9$/l
PLT	181 $x10^9$/l
Na^+	137 mmol/l
K^+	4.3 mmol/l
Creatinine	81 micromol/l
ESR	55 mm/1^{st} hour
CRP	88 mg/l
Varicella zoster IgG antibody	positive

Which of the following is the most appropriate intervention?

A IV corticosteroids

B Oral Aciclovir

C Oral corticosteroids

D Topical Aciclovir

E Topical corticosteroids

Explanation

The answer is Topical corticosteroids -

The most likely diagnosis is pemphigoid gestationalis, originally called herpes gestationalis, because the lesions were falsely thought to be due to herpes virus infection. Where there is local disease (as here confined to the abdomen), topical steroids may be effective, although in the majority of cases, where there are more extensive lesions, systemic steroids may be needed. Where systemic steroids are required, initial starting dose is usually 0.5mg/kg/day; this is then tapered once lesions have healed.

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Question 27 of 111

A 67-year-old man with a history of ischaemic heart disease and atrial fibrillation comes to the Emergency Department for review. He complains that he has developed a blistering rash affecting his face, arms and legs after he has spent the weekend gardening. He appears to have a blistering sunburn type rash affecting his face, arms and legs.

Which of the following drugs is most likely to be the cause of her skin rash?

A Amiodarone

B Bisoprolol

C Digoxin

D Indapmide

E Ramipril

Explanation

The answer is Amiodarone -

Skin reactions are well recognised with Amiodarone. The details from the summary of product characteristics are reproduced below:

Patients taking Amiodarone can become unduly sensitive to sunlight and they should be instructed to avoid exposure to sun and to use protective measures during therapy. Sun sensitivity may persist for several months after discontinuing Amiodarone. In most cases, symptoms are limited to tingling, burning and erythema of sun-exposed skin but severe phototoxic reactions with blistering may be seen.

Other drugs recognised to be commonly associated with photosensitivity include:

- Tetracyclines, fluoroquinolones and sulphonamides
- NSAIDs
- Loop diuretics
- Sulphonylureas
- Neuroleptics
- Antifungals - eg Terbinafine, Itraconazole, Voriconazole
- Miscellaneous agents: Enalapril, oral contraceptives, Diltiazem

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Question 28 of 111

A 24-year-old theatre nurse presents for review. She has red, scaly plaques that are worst on her hands, but are also present on the flexor surfaces of her arms and legs. She complains of a lot of itching. Her past history of note includes coeliac disease.

What diagnosis fits best with this clinical picture?

A	Atopic eczema
B	Dermatitis herpetiformis
C	Lichen planus
D	Psoriasis
E	Subacute cutaneous lupus erythematosus

Explanation

The answer is Atopic eczema –

- Atopic eczema is very common, with a prevalence of up to 10–20% in children.
- Some 85% of patients have disease onset before the age of 5 years.
- In children who develop eczema there is a co-association with asthma or allergic rhinitis in up to 50%.
- Eczema tends to begin on the cheeks in infants and may become generalised.
- In older children and some adults, lesions characteristically affect flexural surfaces, but may not be restricted to these locations.
- Atopic eczema is associated with impaired skin barrier function; it therefore often co-exists with irritant contact dermatitis, which may be triggered and exacerbated by frequent handwashing or wet work.

<u>Treatment</u>

- Regular application of an emollient is essential; some are also suitable as wash

products to allow avoidance of irritation from soap.

- A topical corticosteroid is often necessary: this should be of a potency appropriate to the site of disease and age of the patient; once-daily application is usually sufficient and treatment is often recommended in bursts of perhaps 5–7 days.
- A short course of oral prednisolone may be considered in severe cases (e.g. 20 mg per day with weekly decrements over 4 weeks).
- Ciclosporin, azathioprine, mycophenolate mofetil and methotrexate can be used as steroid-sparing agents.

Dermatitis herpetiformis (Option B) is incorrect. Dermatitis herpetiformis results in intensely itchy vesicles especially on extensor surfaces. These tend to be quickly excoriated. Scaly plaques are not a feature.

Lichen planus (Option C) is incorrect. Lichen planus classically presents with pruritic, violaceous papules. These are frequently seen on the flexor aspect of the wrists and around the ankles. Scaly plaques are not a feature.

Psoriasis (Option D) is incorrect. Red, scaly plaques are certainly typical of psoriasis; however, they tend not to be severely pruritic, which is much more suggestive of eczema. In most cases, psoriasis preferentially affects extensor surfaces rather than flexural areas.

Subacute cutaneous lupus erythematosus (Option E) is incorrect. Subacute cutaneous lupus erythematosus usually presents with annular, scaly plaques at sun-exposed sites. It tends not to be very pruritic. The scenario does not suggest a photodistributed eruption.

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Question 29 of 111

A 35-year-old man has developed an itchy rash on his back and buttocks over the last 4 weeks. Examination shows erythematous plaques with crusts and marks of excoriation over his elbows, buttocks and back. Apart from well-controlled asthma, this patient has no other medical history. Which one of the following investigation, if performed, would be most likely to be diagnostic?

A Autoimmune screen

B Trial of steroids

C Small-bowel biopsy

D A detailed drug history

E Skin scrapings

Explanation

Diagnosing dermatitis herpetiformis

- The diagnosis is dermatitis herpetiformis (DH)
- This is an extremely itchy condition associated with a gluten-sensitive enteropathy (GSE)
- GSE does not cause symptoms in most DH patients
  - less than 10% exhibit symptoms of bloating, diarrhoea, or malabsorption
  - however, greater than 90% show abnormalities upon endoscopic examination
  - two-thirds have villous atrophy detected on intestinal biopsy specimens
  - the other third show elevated intraepithelial lymphocyte counts, increased T-cell receptor gamma/delta intraepithelial lymphocyte counts, or both (this explains the correct answer here of small bowel biopsy; however this test is ***not*** routinely indicated for diagnosis of DH unless GI symptoms are present)
- Patients present with an erythematous rash on the extensor surfaces (elbows, buttocks, shoulders and scalp)

- Vesicles or crusts may be present and mucous membranes may occasionally be affected
- Skin biopsy shows IgA deposits in the unaffected skin on immunofluorescence
- Gastrointestinal symptoms are rare, and treatment is with dapsone and a gluten-free diet

2491

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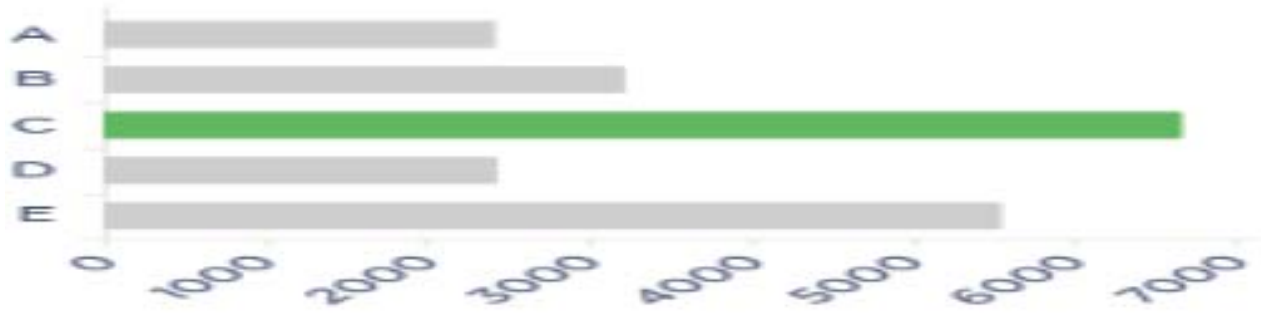
Difficulty: Difficult

Peer Responses



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Question 30 of 111

A 62-year-old heavy smoker with a long history of self-neglect presents to his GP with severe leg pain. On examination there are multiple, small punched-out ulcers situated on the lower third of both legs. Both dorsalis paedis and posterior tibial pulses appear absent. Which diagnosis fits best with this clinical picture?

A Flea infestation

B Multiple venous ulcers

C Vasculitis

D Multiple arterial ulcers

E Traumatic skin damage

Explanation

Arterial ulcers

- This is the typical picture of arterial ulceration in a smoker
- Associated ischaemic leg pain may be particularly intense on elevating the legs and cause sleep interference
- As well as peripheral vascular disease, as evidenced by the absent foot pulses bilaterally, there is also likely to be arterial pathology elsewhere, and it is important to assess for ischaemic heart disease and carotid disease as well

Treatment

- Angioplasty or bypass surgery may only be appropriate for improving peripheral blood supply in a limited number of cases, while peripheral vasodilating drugs are rarely effective
- Sympathectomy may, however, be of some value, and a trial nerve block to assess potential effectiveness is advised in cases of severe pain

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Difficulty: Easy

Peer Responses

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Question 31 of 111

A 55-year-old man has non-infective, necrotising ulcers on his lower limbs. A diagnosis of pyoderma gangrenosum is made. He is currently being investigated by his GP for lower back pain.

Which one of the following underlying conditions is he most likely to have?

A	Autoimmune thrombocytopenia
B	Gout
C	Haemochromatosis
D	Multiple myeloma
E	Non-Hodgkin's lymphoma

Explanation

The answer is Multiple myeloma –

The diagnosis here is pyoderma gangrenosum.

- Pyoderma gangrenosum (PG) typically starts as inflammatory pustules or papules most commonly on the legs.
- These enlarge rapidly and the overlying skin breaks down to produce large necrotic ulcers with a sloughy base, and a raised, purplish, undermined border.
- It is often multifocal.
- Pain tends to be prominent.

Many associations have been described, the strongest of which seem to be:

- Inflammatory bowel disease, either ulcerative colitis or Crohn's disease
- Rheumatoid arthritis
- Haematological disorders including myeloid leukaemias, myelofibrosis, myeloma and monoclonal gammopathies

- Arthritides, especially rheumatoid disease
- Diabetes.

Treatment is usually with topical and oral corticosteroids; various steroid-sparing agents are also used.

Autoimmune thrombocytopenia (Option A) is incorrect. There is no clear association between PG and autoimmune thrombocytopenia; there is a reported case of PG with idiopathic thrombocytopenic purpura, but the patient also had an IgA monoclonal gammopathy, which is more likely to be relevant.

Gout (Option B) is incorrect. Gout is not associated with PG, although various forms of inflammatory arthritis are.

Haemochromatosis (Option C) is incorrect. Haemochromatosis is not associated with PG, although cases in patients with hepatitis C and autoimmune hepatitis have been reported.

Non-Hodgkin's lymphoma (Option E) is incorrect. There have been occasional reports of PG in association with lymphoma, but the link with myeloma is stronger and the history of back pain is more suggestive of the latter diagnosis.

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Question 32 of 111

A 75-year-old man presents to his GP complaining of a lesion on his nose. Examination confirms a well-defined, 8 mm, shiny, pink plaque, with prominent surface telangiectasia and a small central scab.

What diagnosis fits best with this clinical picture?

A	Amelanotic melanoma
B	Basal-cell carcinoma
C	Dermatofibroma
D	Irritated haemangioma
E	Keratoacanthoma

Explanation

The answer is Basal-cell carcinoma (BCC) –

- The description is of a small BCC, probably of nodular type.
- Classically such lesions are described as ‘pearly’, with an impression of being shiny or translucent.
- There may be a rolled edge or central depression.
- There is often a small central scab or ulcer.
- Basal-cell carcinoma is the most common cancer in humans, mostly occurring on the head and neck.
- Subtypes include:
  - Nodular (most common)
  - Superficial (more common on the trunk and limbs, usually presenting as a somewhat scaly, pink plaque, often with the tell-tale rolled edge)
  - Morphoeic (infiltrative and often poorly defined, tending to present more as a shiny, smooth, scar-like lesion with telangiectasia)
  - Pigmented (with focal or extensive brown or grey pigmentation)

- Metastasis is extremely rare and usually only occurs in the context of a neglected 'giant' BCC.
- The major risk factor for BCC is chronic sun exposure.
- Most patients with BCC are cured by surgical excision, typically with a 4 mm clinical margin.
- Clinically indistinct lesions or those in sites where tissue sparing is important (e.g. lip, eyelid) are amenable to Mohs' micrographic surgery, in which the entire cut surface of the excision specimen is checked histologically for clearance, making wide margins unnecessary.
- Other modalities include radiotherapy and, for superficial BCC, curettage, photodynamic therapy and imiquimod cream.

Amelanotic melanoma (Option A) is incorrect. Amelanotic melanoma can be difficult to diagnose clinically as the features are non-specific. The best clue to the diagnosis tends to be foci of melanoma-like pigmentation. Such lesions can mimic a variety of other benign and malignant lesions including actinic keratosis, Bowen's disease, BCC and poorly differentiated squamous-cell carcinoma (SCC).

Dermatofibroma (Option C) is incorrect. Dermatofibroma is a common benign lesion, usually presenting as a firm pigmented papule. It most commonly occurs on the legs and is very unusual on the face.

Irritated haemangioma (Option D) is incorrect. A traumatised or irritated haemangioma is somewhat plausible at this site and the scab would fit, but such lesions are usually red or purple rather than pink; the description in the scenario is classical for BCC.

Keratoacanthoma (Option E) is incorrect. Keratoacanthoma is a benign mimic of a well-differentiated SCC. It presents as a rapidly enlarging red nodule with a central keratin plug; there is then a plateau phase of stable size (of variable duration), followed by spontaneous involution. Usually a small scar results. In practice, most are excised in case they are SCC – as the histological appearances are also so similar to SCC, most pathologists will not confirm keratoacanthoma on a biopsy sample.

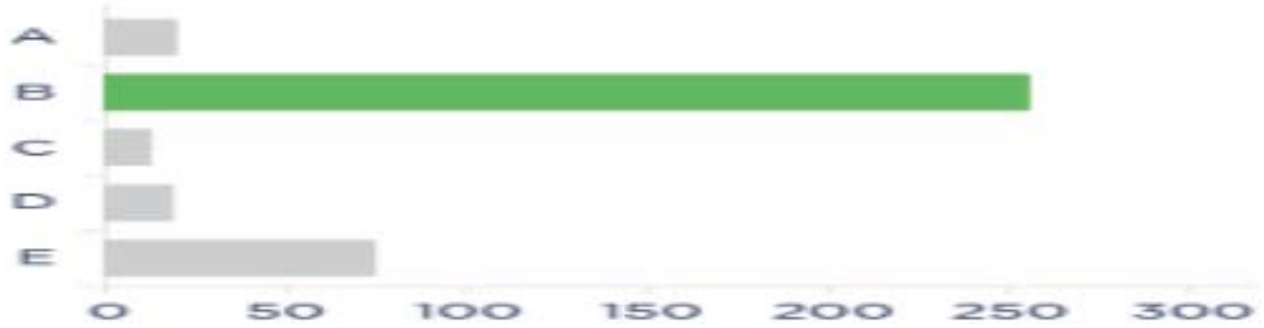
46407

Next Question

Previous Question Tag Question Feedback End Review

Difficulty: Average

Peer Responses



Session Progress

Responses Correct:	0
Responses Incorrect:	111
Responses Total:	111
Responses - % Correct:	0%

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Question 33 of 111

A 55-year-old woman known to suffer from primary biliary cirrhosis complains of a rash over her wrists and ankles. She has recently seen her gastroenterologist who has told her to continue cholestyramine, which she has been taking for 3 years. Examination shows purplish, polygonal, flat-topped papules on her wrists and ankles. She also has a fine, white, lacy network in her mouth.

What is the diagnosis?

A	Candidiasis
B	Drug reaction
C	Lichen planus
D	Pityriasis rosea
E	Scabies

Explanation

The answer is Lichen planus –

- Classical lichen planus is characterised by an itchy, violaceous, polygonal, flat-topped rash most commonly developing over the wrists and ankles.
- A pale, lacy network develops and is often found in the mouth, although this may be asymptomatic.
- The presence of Wickham's striae – a fine, white lacy pattern over the papules – is characteristic.
- The Koebner phenomenon is typically seen in lichen planus (whereby the rash 'colonises' sites of trauma a few days later).
- It has been associated with liver disease including hepatitis C, primary biliary cirrhosis and chronic active hepatitis.
- It usually resolves in 6–18 months.
- Lichen planus often responds to potent or very potent topical steroid, but some

patients will require oral prednisolone.

Candidiasis (Option A) is incorrect. Candidiasis is common in the mouth, but gives rise to white plaques (or a glazed erythematous appearance), rather than a lacy network. Although it may affect other sites, such as the genitals and skin flexures, it does not lead to a violaceous, papular eruption.

Drug reaction (Option B) is incorrect. Most types of drug reaction are more widespread than in this case. They typically occur relatively soon (1–8 weeks) after initiation of a drug. Lichenoid drug eruptions can begin later than this, but tend to be widespread. They often lack some of the characteristic features of lichen planus described in this case.

Pityriasis rosea (Option D) is incorrect. Pityriasis rosea typically begins with a herald patch (a solitary red plaque), which is followed a few days later by a widespread truncal rash comprising superficial plaques with peripheral scaling, in a 'Christmas tree' configuration. It is self-limiting, usually resolving after approximately 6 weeks and no treatment is required.

Scabies (Option E) is incorrect. Scabies presents with intense pruritus and excoriation. Burrows should be sought. Typically affected sites include the hands and wrists, around the nipples and the genital area. Penile papules are a characteristic finding. Treatment is usually with topical permethrin (two applications a week apart), and is required for the patient and their close contacts. Pruritus may continue for weeks after successful eradication.

46386

Next Question

Previous Question | Tag Question | Feedback | End Review

Difficulty: Average

Peer Responses

Session Progress

Responses Correct:	0
Responses Incorrect:	111
Responses Total:	111
Responses - % Correct:	0%

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Question 34 of 111

A 17-year-old woman presents with an erythematous rash affecting her wrists, ears and just below her belly button. She admits to wearing some bangles, earrings and a belly-button ring in the areas which appear to be affected. She is otherwise well and has no significant past medical history, only medication of note is the oral contraceptive pill. On examination, you can see patches of an eczematous-type rash in the distribution that she describes. The table below contains the investigation results.

Hb	13.1 g/dl
WCC	5.9×10^9/litre
PLT	200×10^9/litre
Na^+	139 mmol/litre
K^+	4.5 mmol/litre
Creatinine	90 µmol/litre

Which one of the following is the most appropriate investigation?

A RAST testing

B Skin biopsy

C Serum immunoglobulins

D Patch testing

E Fungal culture

Explanation

Contact dermatitis

- The distribution of the rash in this woman suggests contact dermatitis to nickel, which is often prevalent in belt buckles and cheaper costume jewellery, such as earrings or bangles

- Patch testing is the investigation of choice, where small amounts of the suspected chemical responsible for the allergy are applied to the skin and left occluded for a period of 2 days
- RAST testing has fallen out of favour in recent years due to the availability of more specific immune testing
- Occupation or planned occupation will dictate testing to a number of other allergens
- It is not uncommon for patients allergic to nickel to also show cross reactivity to latex, which may be a consideration if considering work where gloves are required to prevent exposure to hazardous materials

22526

Next Question

Previous Question | Tag Question | Feedback | End Review

Difficulty: Easy

Peer Responses

Session Progress

Responses Correct:	0
Responses Incorrect:	111
Responses Total:	111
Responses - % Correct:	0%

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Question 35 of 111

A 31-year-old man presents with a number of small epidermal blisters, predominantly affecting his scalp, scapular area and buttocks. The blisters are intensely itchy. Skin biopsy is positive to IgA immunofluorescence. Which diagnosis fits best with this clinical picture?

A Pemphigus

B Pemphigoid

C Porphyria cutanea tarda

D Dermatitis herpetiformis

E Erythema multiforme

Explanation

Dermatitis herpetiformis

- The type and position of the blisters, coupled with the fact that the skin biopsy is positive to IgA, is highly suggestive of dermatitis herpetiformis
- As well as IgA positivity on skin biopsy, blisters may also contain a small amount of leucocyte material (so-called ‘micro-abscesses’)
- The disease most commonly presents in the third or fourth decade, with a slight male preponderance
- Most patients may have no overt signs of malabsorption, although jejunal biopsy in asymptomatic patients may still show evidence of subtotal villous atrophy

Treatment

- Dermatitis herpetiformis does not respond to steroid treatment, itching may be treated with dapsone (appropriate haematological monitoring is necessary) or sulfapyridine
- It may take many months for a skin response to a gluten-free diet to appear; if a response is elicited, patients must be maintained on a permanent gluten-free diet

3342

Next Question

Previous Question | Tag Question | Feedback | End Review

Difficulty: Average

Peer Responses

Session Progress

Responses Correct:	0
Responses Incorrect:	111
Responses Total:	111
Responses - % Correct:	0%

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Question 36 of 111

A 31-year-old woman presents with a painful rash on her shins and arms, which developed over a period of 2 weeks. She also gives a history of malaise, fever and joint pains affecting her lower limbs. Examination shows that she has a nodular tender rash with a blue/purple discolouration on both shins and arms. There is no pruritus but the rash is tender. Which one of the following investigations is the most appropriate initial step towards reaching a diagnosis?

A	Chest X-ray
B	Bronchoscopy and lavage
C	Skin biopsy
D	Autoimmune screen
E	Pulmonary function tests

Explanation

Diagnosing erythema nodosum

- This woman has erythema nodosum, which can be associated with
  - drugs (sulphonamides, oral contraceptives, penicillin)
  - sarcoidosis
  - inflammatory bowel disease
  - tuberculosis
  - streptococcal infections
  - leprosy
  - psittacosis
  - histoplasma
  - blastomycosis
  - pregnancy
- Treatment is with bedrest and analgesics

- Recovery may take weeks to months and recurrent attacks can occur
- Initial chest X-ray would pick up the possibility of both sarcoidosis and tuberculosis and would therefore be the investigation of choice to perform first in this case
- The condition can occur after beta-haemolytic streptococcal infection, if throat swab had been an option, that would have been an appropriate first choice investigation

2490

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Difficulty: Average

Peer Responses

Session Progress

Responses Correct:	0
Responses Incorrect:	111
Responses Total:	111
Responses - % Correct:	0%

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Question 37 of 111

A 54-year-old man presents to his GP with a scaling rash on his scalp and the extensor aspect of his knees and elbows. Psoriasis is diagnosed. Which HLA subtype is most closely associated with psoriasis?

A HLA-CW6

B HLA-DR4

C HLA-DR3

D HLA-B27

E HLA-DR2

Explanation

Psoriasis

- Psoriasis is associated with HLA-CW6 and HLA-DR7
- Pustular psoriasis is associated with the HLA-B27 subtype
- Psoriasis is very common, with an incidence in Caucasians estimated at between 1 and 2%
- This is almost certainly an underestimate as many patients with mild disease never present to the doctor

Skin abnormalities

- The most important abnormality present in psoriatic skin is an increased epidermal proliferation rate
- The time taken for epidermal cells to mature in normal skin is put at around 27 days, in psoriasis this time is shortened to around 4 days

Psoriatic subtypes

- A number of subtypes of psoriatic disease exist and are characterised according to

clinical patterns, these subtypes include
- classic plaque psoriasis
- guttate psoriasis
- flexural psoriasis
- erythrodermic psoriasis
- pustular psoriasis

- Nail changes often occur, and patients may also suffer associated arthritis ‘psoriatic arthritis’

3339

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Difficulty: Average

Peer Responses

Session Progress

Responses Correct:	0
Responses Incorrect:	111
Responses Total:	111
Responses - % Correct:	0%

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Question 38 of 111

A 62-year-old woman has recently been diagnosed as suffering from lentigo maligna on her face. Which factor is most associated with malignant change?

A Presence of other comorbidities

B Thickness of the lesion

C Initial size of the lesion (>6mm)

D Colour of the lesion

E Patient's age

Explanation

Lentigo maligna

- Lentigo maligna represents an increased number of melanocytes at the epidermodermal junction
- It begins as a flat, freckle-like lesion, which can change into a malignant melanoma
- It occurs on the facial or sun-exposed skin of patients in their sixties or older
- Malignant change should be suspected with a change in
  - size (>6mm lesions are more likely to undergo malignant change)
  - outline
  - colour
  - surface
  - elevation of the lesion
- As the lesion is confined to the epidermis, thickness is not related to prognosis until it undergoes transformation to a melanoma
- It spreads via the lymphatics, and satellite lesions are commonly seen
- The prognosis is directly related to the thickness of the tumour assessed at histological examination
- The prognosis is also related to the site

+ patients with lesions on the trunk fare better than those with facial lesions, but worse than those with lesions on the limbs

2598

Next Question

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Difficulty: Average

Peer Responses

Session Progress

Responses Correct:	0
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Responses - % Correct:	0%

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Question 39 of 111

A 34-year-old man presents to his GP with a rash on his legs. On examination, there are a number of discrete, tender, red nodules. He denies systemic symptoms and has no significant past medical history.

What diagnosis fits best with this clinical picture?

A	Erysipelas
B	Erythema nodosum
C	Insect bites
D	Leukocytoclastic vasculitis
E	Post-traumatic ecchymoses

Explanation

The answer is Erythema nodosum –

- Erythema nodosum is an acute panniculitis (inflammation in the fat) that produces tender nodules or plaques on the shins and occasionally elsewhere.
- Lesions are usually well circumscribed. The overlying skin is erythematous but otherwise normal, with no scaling. Firm induration is typical and the lesions may be exquisitely tender.
- It may be idiopathic, but is associated with:
  - Sarcoidosis
  - Inflammatory bowel disease
  - Streptococcal infections
  - Tuberculosis
  - Treatment with sulfonamides or the oral contraceptive pill
  - Pregnancy.
- Treatment is usually with non-steroidal anti-inflammatory drugs.

Erysipelas (Option A) is incorrect. Erysipelas is a form of cellulitis caused by group-A *Streptococcus*. It usually causes confluent erythema rather than discrete lesions and is not typically particularly tender. It is usually accompanied by fever and malaise.

Insect bites (Option C) is incorrect. Most insect bite reactions are papular rather than nodular, and are itchy rather than tender. Occasionally, they may blister.

Leukocytoclastic vasculitis (Option D) is incorrect. Leukocytoclastic vasculitis leads to purpuric papules, rather than nodules. As this may be idiopathic, there may be no associated symptoms.

Post-traumatic ecchymoses (Option E) is incorrect. No history of injury is given to suggest post-traumatic ecchymoses, which are violaceous rather than erythematous.

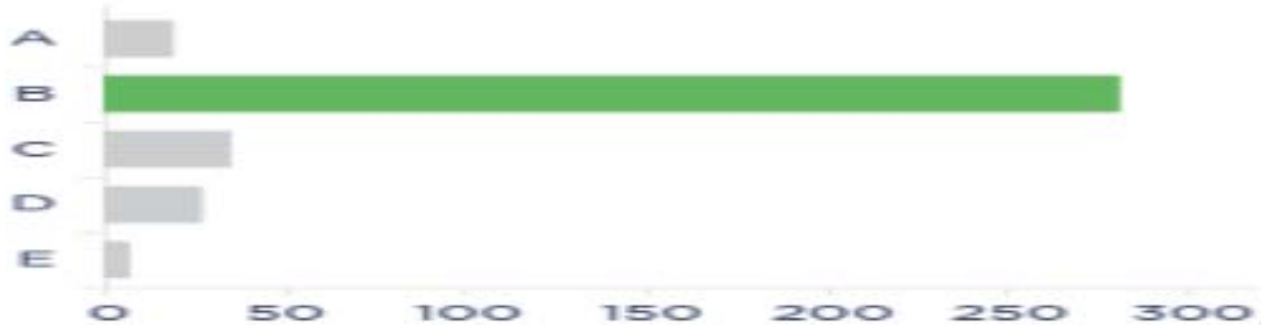
46411

Next Question

Previous Question Tag Question Feedback End Review

Difficulty: Average

Peer Responses



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Question 40 of 111

A GP is called to the nursing home to see a 75-year-old man with dementia and severe pruritus. On examination, he has excoriations over his trunk and limbs. There is some scaling over his palms, most prominently in the web spaces.

Which is the most likely diagnosis?

A	Atopic eczema
B	Chronic renal failure
C	Diabetes
D	Iron-deficiency anaemia
E	Scabies infestation

Explanation

The answer is Scabies infestation –

Scabies is caused by infestation with the *Sarcoptes scabiei* mite. It is transmitted by close contact, and is relatively common within nursing homes and other institutions. It presents with severe pruritus. If present, burrows (linear crusted lesions of a few millimetres in length) are pathognomonic and penile papules are also highly suggestive. It also has a predilection for the web-spaces and around the nipples. Scalp involvement only occurs in young babies and very debilitated adults. Excoriations tend to be prominent. Treatment is usually with permethrin; close contacts should be treated concurrently.

Atopic eczema (Option A) is incorrect. It would be unusual for atopic eczema to present at this age; the primary eczematous eruption would be more prominent than secondary excoriation.

Chronic renal failure (Option B) is incorrect. Uraemia in chronic renal failure may cause pruritus but rarely a skin rash.

Diabetes (Option C) is incorrect. Diabetes is associated with several skin conditions but does not typically present with pruritus.

Iron-deficiency anaemia (Option D) is incorrect. Iron-deficiency anaemia may cause pruritus but rarely as severe as scabies.

46404

Next Question

Previous Question Tag Question Feedback End Review

Difficulty: Average

Peer Responses

Session Progress

Responses Correct:	0
Responses Incorrect:	111
Responses Total:	111
Responses - % Correct:	0%

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Question 41 of 111

An 18-year-old girl presents complaining of an odd patch of skin that she noticed on her left thigh and that has developed over the past couple of weeks. On examination there is a very firm and slightly indurated pale area of skin on her upper thigh, which is a few centimetres across, and the lesion has an erythematous border. The pale area of skin appears to have a rather atrophic, glazed appearance. Which diagnosis fits best with this clinical picture?

A Lichen sclerosus et atrophicus

B Pityriasis versicolor

C Dermatomyositis

D Morphoea

E Pityriasis rosea

Explanation

Morphoea

- Morphoea presents as a very firm, white or violaceous patch of skin on any body site, but more commonly on the thighs, trunk and upper arms
- The disease occurs most commonly in children or young adults
- Developing morphoea lesions have a well-demarcated red or violet peripheral edge
- As disease activity burns out, the edge assumes the same colour as the central lesion, and the lesion itself becomes very firm with an atrophic glazed surface appearance
- A linear variant of morphoea may be seen on the scalp and face of young children, and is known as ‘en coup de sabre’.
- Some commentators postulate that the disease may be linked to infection with *Borrelia burgdorferi*, although circulating antibodies or spirochaetes are not identified in every patient
- In support of this hypothesis, there are anecdotal case reports that some patients with early morphoea lesions appear to respond to tetracycline antibiotics

Next Question

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Difficulty: Difficult

Peer Responses

Session Progress

Responses Correct:	0
Responses Incorrect:	111
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Responses - % Correct:	0%

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Question 42 of 111

A 26-year-old man returns from a holiday in Spain. He is concerned that he has two patches of depigmentation on his upper chest where he has failed to gain an adequate suntan. On examination these patches consist of well-demarcated scaly white skin, with a marked absence of pigmentation compared with the tanned areas. Which of the following is the most appropriate treatment in this case?

A Fusidic acid ointment

B Clotrimazole ointment

C 1% hydrocortisone cream

D Fluconazole tablets

E Ketoconazole tablets

Explanation

Pityriasis versicolor

- This man has pityriasis versicolor, caused by the yeast *Malassezia furfur*
- Presentation is with patches of well demarcated scaling skin that become depigmented compared with surrounding normal skin areas, and are particularly noticeable during the summer months for this reason

Treatment

- Treatment is usually with topical antifungals such as clotrimazole or terbinafine
- Systemic antifungals are rarely required
- Unfortunately the condition can recur and repeat treatments may be required

8259

Next Question

Previous Question Tag Question Feedback End Review

Difficulty: Average

Peer Responses

Session Progress

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Responses Incorrect:	111
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Responses - % Correct:	0%

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Question 43 of 111

A 19-year-old student presents for review. He has just returned to university for the start of the Spring term. He gives a history of a red patch of skin on his chest, surrounded by an area of skin scaling, which was followed about 3 days later by the development of oval macules over the rest of his trunk, arms and thighs. He is otherwise well. Which diagnosis fits best with this clinical picture?

A Pityriasis rubra pilaris

B Pityriasis versicolor

C Pityriasis rosea

D Darier's disease

E Likely drug reaction

Explanation

Pityriasis rosea

- The first clinical lesion to appear in pityriasis rosea is the so-called 'herald patch', an isolated erythematous patch, appearing on the trunk, surrounded by a ring of scaling skin
- A number of oval macules appear on the upper arms, remainder of the trunk and upper thighs some 2–4 days later
- Involvement of the hands, feet or scalp is rare
- Severe itching is uncommon
- Pityriasis rosea normally remits within 4–8 weeks
- Cases occur with increasing frequency in spring and autumn, suggesting a possible viral aetiology

Treatment

- Systemic antihistamines or calamine lotion may be useful to relieve itching

+ Topical steroids do not shorten the duration of the disease, and systemic steroids have no value in disease modification

3345

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Difficulty: Average

Peer Responses

Session Progress

Responses Correct:	0
Responses Incorrect:	111
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Responses - % Correct:	0%

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Question 44 of 111

A 32-year-old man presents to the clinic with a burning stinging rash which affects the back of his neck and shoulders, elbows, knees and his buttocks. Examination reveals an erythematous rash characterised by a number of small papules and vesicles in a herpetiform pattern. There are periods when the rash improves, but it symptoms can be severe and debilitating for periods of a few weeks. Past medical history of note includes Hashimoto's thyroiditis which is managed with thyroid hormone replacement. The table contains the investigation results. Skin biopsy results showed neutrophil infiltration of dermal papillae, fibrin deposition, neutrophil fragments and oedema. Evidence of papillary microabscesses is seen.

Hb	11.9 g/dl
WCC	6.1×10^9/litre
PLT	235×10^9/litre
Na^+	140 mmol/litre
K^+	4.9 mmol/litre
Creatinine	105 µmol/litre

Which of the following represent the most appropriate first line treatment for this man?

A Colchicine

B Prednisolone

C Gluten-free diet and dapsone

D Dapsone

E Atkins diet

Explanation

Dermatitis herpetiformis

- This man has symptoms and a skin biopsy result consistent with dermatitis herpetiformis
- It is not surprising that no gastrointestinal symptoms are identified as these are only found in around 10% of patients, although abnormalities on endoscopy are found in 90%
- Management of choice is a gluten-free diet, although patients can find this very difficult to achieve
- The addition of dapsone is often needed to resolve symptoms
- Colchicine is a second-line alternative to dapsone
- Other autoimmune diseases occur more commonly in patients with dermatitis herpetiformis, these include type 1 diabetes, autoimmune thyroid disease and myasthenia gravis

18743

Next Question

Previous Question Tag Question Feedback End Review

Difficulty: Average

Peer Responses

Session Progress

Responses Correct:	0
Responses Incorrect:	111
Responses Total:	111
Responses - % Correct:	0%

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Question 45 of 111

A 52-year-old woman, referred by her general practitioner, presents for advice. On a couple of occasions during the past few years she has presented to her GP with multiple crops of pruritic excoriated papules on her trunk and limbs. These have occasionally been accompanied by purpuric lesions. There is no systemic upset, and spontaneous remission usually occurs after a few months, but this latest episode has taken longer than usual to resolve. Biopsy of the lesions reveals a lymphocytic vasculitis. Which diagnosis fits best with this clinical picture?

A	Insect bites
B	Dermatitis herpetiformis
C	Secondary syphilis
D	Pityriasis lichenoides acuta
E	Erythema nodosum

Explanation

Pityriasis lichenoides acuta

- Pityriasis lichenoides acuta is a purely cutaneous disorder characterised by lymphocytic infiltration, and characterised by multiple crops of pruritic papules occurring on the trunk and limbs
- Purpuric lesions are occasionally seen
- Associated systemic upset is rare, and spontaneous remission occurs after a period of months or years

Diagnosis

- Diagnosis is based on clinical appearance and confirmed on biopsy
- Syphilitic lesions are a reasonable differential, but those lesions more commonly affect the palms and the soles, although these areas are rarely affected by pityriasis lichenoides

Treatment

- Treatment is usually with topical preparations such as ichthyol 1% in calamine
- UV light therapy may benefit some patients

3351

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Difficulty: Average

Peer Responses

Session Progress

Responses Correct:	0
Responses Incorrect:	111
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Responses - % Correct:	0%

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Question 46 of 111

A 23-year-old man with type 1 diabetes has noticed an unusual lesion on the dorsum of his left hand. On examination he has an erythematous circular lesion that has a raised border. Which diagnosis fits best with this clinical picture?

A Necrobiosis lipoidica

B Pyoderma gangrenosum

C Scabies infection

D Psoriasis

E Granuloma annulare

Explanation

Granuloma annulare

- Granuloma annulare is said to occur in association with type 1 diabetes in adults
- The condition is characterised by well-circumscribed circular erythematous lesions, often multiple, which occur on the hands and feet
- They clear spontaneously after 3–6 months, and trauma (eg biopsy) may speed up their clearance

Other notes

- Necrobiosis lipoidica also occurs in patients with diabetes
- This condition is characterised by firm, red–yellow plaques, that occur over the shins
- These lesions may actually pre-date the development of diabetes by many years
- Local steroid treatment with triamcinolone may be useful in some patients, but usually protection from trauma is the most important intervention
- Atherosclerosis or neuropathy associated with diabetes may of course contribute to other skin lesions linked to diabetes mellitus

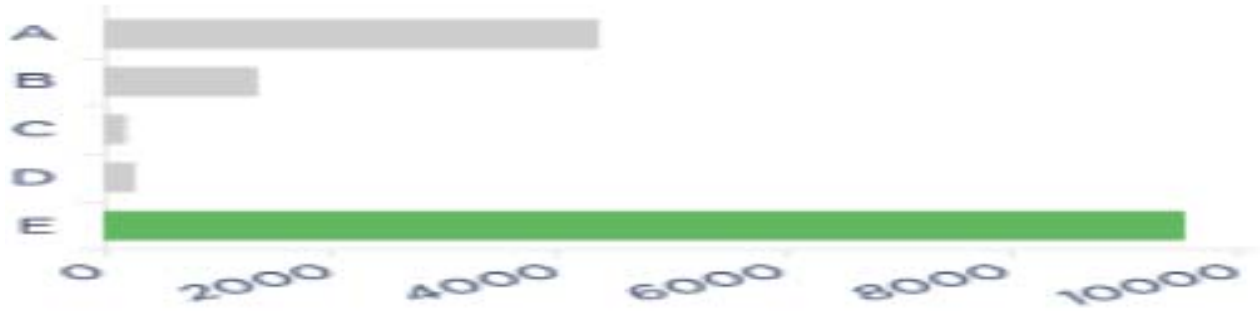
3354

Next Question

Previous Question Tag Question Feedback End Review

Difficulty: Average

Peer Responses



Session Progress

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Responses Incorrect:	111
Responses Total:	111
Responses - % Correct:	0%

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Question 47 of 111

A 65-year-old woman presents with a tense blistering skin rash that predominantly affects the flexural surfaces of her arms and legs, and she has some blisters forming on her torso. She has never had blisters inside her mouth. On examination she has a number of bullae, more severe on the flexor surfaces of her arms and legs. There are no visible oral lesions. She tells you that the bullae usually heal without scarring. The table below contains the investigation results.

Hb	13.1 g/dl
WCC	7.4×10^9/litre
PLT	201×10^9/litre
Na+	141 mmol/litre
K+	4.4 mmol/litre
Creatinine	110 µmol/litre
Skin biopsy – subepidermal blister, polymorphous inflammatory infiltrate with a predominance of eosinophils	

Which one of the following is the most likely diagnosis?

A Pemphigus

B Bullous pemphigoid

C Erythema multiforme

D Epidermolysis bullosa

E Dermatitis herpetiformis

Explanation

Pemphigoid

✚ The distribution of blisters and skin biopsy fits with a diagnosis of pemphigoid

- Whilst mouth lesions are common in pemphigus, they are rarely seen in patients with pemphigoid
- Various techniques exist to measure IgG directed against the basement membrane, but most, such as immunoelectron microscopy and ELISA have limited availability
- Furosemide, NSAIDs, angiotensin-converting enzyme (ACE) inhibitors and penicillamine are all known to be associated with the development of pemphigoid

21347

Next Question

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Difficulty: Average

Peer Responses

Session Progress

Responses Correct:	0
Responses Incorrect:	111
Responses Total:	111
Responses - % Correct:	0%

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Question 48 of 111

A 66-year-old woman presents with a lesion on her face. She is red-haired and has grown up during the early part of her life in Australia. Over the past few months she has noticed intense itching and burning affecting an area of brownish discoloration on her cheek that has been present for 4 years or more. Examination reveals a flat brownish discoloration affecting a 7 mm area of the cheek. The table below contains the investigation results.

Hb	13.2 g/dl
WCC	6.1×10^9/litre
PLT	240×10^9/litre
Na^+	139 mmol/litre
K^+	4.6 mmol/litre
Creatinine	110 µmol/litre
Skin biopsy	T_{is} melanoma in situ

Which of the following is the most appropriate treatment?

A Cryotherapy

B Radiation therapy

C Imiquimod cream

D Surgical excision

E Surgical excision and systemic chemotherapy

Explanation

Lentigo maligna

- This patient has lentigo maligna, melanoma in situ
- Whilst cryotherapy, radiation therapy and imiquimod cream may be options in patients

unfit for surgery, surgical excision is in fact the treatment of choice

- For tumour in situ, a resection margin of 0.5 cm margin was previously recommended, but a study has recently suggested this is inadequate, and a margin of 1 cm may be more appropriate
- Lentigo maligna occurs more commonly in those who are pale skinned, have a history of severe sun exposure, porphyria cutanea tarda and Werner syndrome as well as in association with a number of other conditions

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Difficulty: Average

Peer Responses

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Responses Total:	111
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Question 49 of 111

A 35-year-old woman presents with yellowish mottling and overlying 'goose bumps' over the skin on her neck. The skin appears puckered. She is known to have mitral valve prolapse.

What is the most likely diagnosis?

A	Ehlers–Danlos syndrome
B	Marfan syndrome
C	Necrobiosis lipoidica
D	Pseudoxanthoma elasticum
E	Xanthoma disseminatum

Explanation

The answer is Pseudoxanthoma elasticum –

- Pseudoxanthoma elasticum is a hereditary disorder of elastic tissue with calcification involving the skin, eyes and vasculature.

Skin appearance

- The characteristic skin appearance is of yellow papules arranged in a linear or reticular configuration, coalescing into plaques most commonly over the neck; other flexural areas may be affected.
- The skin resembles that of a plucked chicken.

Manifestations

- Vascular manifestations are:
  - Renovascular hypertension (intimal occlusion of the renal arteries)
  - Peripheral vascular disease and claudication

- Premature coronary artery disease (calcification of the internal elastic laminae of arteries)
- Mitral valve prolapse
- Bleeding from the gastrointestinal tract.

- Angioid streaks are found in 85% of patients: linear grey or dark-red streaks with irregular edges lying beneath the retinal vessels.
- Visual loss may occur due to macular involvement by a streak or scarring secondary to a choroidal/retinal haemorrhage.
- Visual acuity may decline in young patients.

Ehlers–Danlos syndrome (Option A) is incorrect. This comprises a group of inherited connective tissue disorders. These variably can result in hyperelastic or fragile skin, joint hypermobility and blood vessel fragility. Mitral valve prolapse can be a feature, but the plucked chicken skin appearance is not seen.

Marfan syndrome (Option B) is incorrect. This autosomal-dominantly inherited disorder of connective tissue does lead to specific skin signs, although striae may occur. Typical features include arachnodactyly and other bony abnormalities, lens dislocation, aortic aneurysm or dissection, and mitral valve prolapse.

Necrobiosis lipoidica (Option C) is incorrect. This relatively common disorder of unknown aetiology is associated with diabetes mellitus in some cases. It presents with shiny, atrophic plaques, usually on the legs.

Xanthoma disseminatum (Option E) is incorrect. This rare form of non-Langerhans cell histiocytosis presents with numerous brownish papules on the face and trunk, which may coalesce extensively. About 40% of sufferers will have diabetes insipidus. It is not associated with mitral valve disease.

46400

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Difficulty: Average

Peer Responses

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Question 50 of 111

A 19-year-old lady who has a history of paracetamol overdose on three occasions presents with a rash on her arm that developed overnight. On examination the rash is linear and erythematous. The table below contains the investigation results.

Hb	12.1 g/dl
WCC	5.0×10^9/litre
PLT	200×10^9/litre
Na^+	139 mmol/litre
K^+	4.5 mmol/litre
Creatinine	100 µmol/litre
ESR	10 mm/hr

What is most likely diagnosis?

A Dermatitis artefacta

B Impetigo

C Pityriasis versicolor

D Contact dermatitis

E Psoriasis

Explanation

Dermatitis artefacta

- This woman's history of previous attendances with paracetamol overdose, and the linear appearance of the rash suggest that they are self inflicted
- As such the mainstay of management is counselling and psychotherapy in this case, rather than any specific medication

+ If there is evidence of superficial infection, then topical antibiotic ointment may be appropriate

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Question 51 of 111

A 55-year-old man complains of muscle weakness and finds it difficult to get up from a chair. His wife mentions that over the last few months he has developed dyspnoea on exertion. He has lost some weight over the previous 3 months and also complains of a scaling rash over his elbows and a purplish rash of the eyelids. He is an ex-smoker and used to work as a car salesman. He drinks 20 units of alcohol a week. What is the most likely diagnosis?

A	Motor neurone disease
B	Primary autoimmune dermatomyositis
C	Bronchogenic carcinoma
D	Cushing's syndrome
E	Alcohol-induced myopathy

Explanation

Dermatomyositis

- Dermatomyositis is a rare disease in which a characteristic rash is associated with polymyositis
- When it develops over the age of 40 years, about one-third of patients prove to have a carcinoma
- It is more common in females

Clinical findings

- The rash affects the face and often the extensor bony prominences of the shoulders and limbs, as well as the backs of the hands
- A fixed, purplish, erythematous non-itching rash with variable oedema is typical
- Puffy, red, upper outer eyelids are commonly seen
- The rash can also be seen on the knuckles and dorsal fingers, with gross dilatation of the posterior nail fold capillaries

- Weakness of the major proximal muscle groups is also commonly seen
- Rarely, involuntary muscles may be involved, leading to potentially dangerous or even fatal difficulties in swallowing or breathing
- Calcification in deep muscle planes is typical of chronic childhood dermatomyositis, but is uncommon in adults

Diagnosis

- Raised blood levels of creatine phosphokinase suggest the diagnosis
- Muscle biopsy confirms the diagnosis
- The presence of the anti-Jo1 antibody is associated with pulmonary involvement

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Difficulty: Easy

Peer Responses

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Question 52 of 111

A 37-year-old traveller to Latin America presents with an ulcer in his nose, and says that he has suffered problems with nasal congestion for some time. He had been working for around 9 months or so on an Operation Raleigh project at a jungle school. On examination there is a firm red ulcerated papule in the left nostril that involves the nasal septum. The table below contains the investigation results.

Hb	12.1 g/dl
WCC	9.1×10^9/litre
PLT	202×10^9/litre
Na^+	142 mmol/litre
K^+	4.6 mmol/litre
Creatinine	105 µmol/litre

Which one of the following is the most likely diagnosis?

A Visceral leishmaniasis

B Basal-cell carcinoma

C Squamous-cell carcinoma

D Mucocutaneous leishmaniasis

E Blastomycosis

Explanation

Mucocutaneous leishmaniasis

- This presentation with an ulcerating papule involving the nasal septum is very typical of mucocutaneous leishmaniasis
- In this condition laboratory investigations are usually normal, and culturing the parasite from a lesion is the simplest way to confirm the diagnosis; PCR does exist in some

centres however

- Sodium stibogluconate is the usual therapy of choice
- *Leishmania viannia braziliensis* is one South American species known to result in mucocutaneous infection

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Difficulty: Easy

Peer Responses

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Question 53 of 111

A 32-year-old army captain has returned to the UK after a tour of duty with his men. He complains of intense itching affecting his finger-webs, and the flexoral aspect of his wrists. There was some itching around the groin, but this settled after repeated bathing. On examination there appears to be excoriation in the finger-webs. What diagnosis fits best with this clinical picture?

A Contact dermatitis

B *Sarcoptes scabiei* infection

C Psoriasis

D Dermatitis herpetiformis

E Pemphigoid

Explanation

Scabies

- This man has been in close contact with his men during a foreign tour of duty. It is likely that he has come into contact with *S. scabiei*, the cause of scabies
- The commonest sites for itching are the finger-webs, flexural surfaces of the wrists, points of the elbows and perineum, and areolar regions in women

Diagnosis

- Diagnosis is usually made by using a needle to extract the scabies mite or acarus from its burrow
- The area may also be painted with India ink, which is taken up by the scabies mite burrows, and can show the extent of infestation

Treatment

- Treatment is with topical preparations such as permethrin cream or malathion

✚ The whole body should be treated and the preparation left on for up to 24 h if possible

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Difficulty: Easy

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Question 54 of 111

A 23-year-old woman presents to the Dermatology Clinic with a severe erythematous rash on her face. She returned from a holiday in Goa some 10 days ago, and you understand that on one of the last days of her holiday she paid for a henna tattoo on her left cheek. On examination you can see the henna tattoo is surrounded by intense erythema, with papules and vesicles that the patient says are extremely itchy. Which one of the following chemicals is most likely to have been contained in the henna tattoo and caused the reaction?

A Nickel

B Formaldehyde

C P-Phenylaminediamine

D Lanolin

E Isothiazolinones

Explanation

P-Phenylaminediamine

- P-Phenylaminediamine (PPD) is known to be contained in a number of hair dyes and products used for temporary henna tattooing
- For this reason, individuals who want to undergo this type of procedure are recommended to have a test patch dyed first, so that if allergic dermatitis occurs, it can be identified before a large area of hair or prominent area of skin is treated
- Isothiazolinones are present in a number of cosmetics, and are another common cause of allergic contact dermatitis
- Patients who are prone to allergic contact dermatitis also often suffer from nickel allergy
- Topical corticosteroids are the mainstay of treatment for the condition
- Formaldehyde is a preservative not normally found in cosmetics as it is known to be irritant
- Lanolin is widely used in cosmetics and has low allergenic potential

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Difficulty: Difficult

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Question 55 of 111

A 24-year-old woman is referred by her GP with a number of large boil-like lesions that have appeared on her back over the course of a few days. She is awaiting investigations by a gastroenterologist for diarrhoea and has been found to be anaemic. On examination in the Dermatology Clinic, three out of the four lesions have broken down, leaving large ulcerated painful areas. Which diagnosis fits best with this clinical picture?

A Erythema induratum

B Pyoderma gangrenosum

C Necrobiosis lipoidica

D Erythema nodosum

E Erythema multiforme

Explanation

Pyoderma gangrenosum

- Pyoderma gangrenosum is characterised by the sudden and dramatic appearance of a number of large ulcerating lesions
- Associated fever and malaise is frequent, and the lesions may appear at the same time as early presentation of inflammatory bowel disease (Crohn's or ulcerative colitis)
- Monoclonal gammopathies, myeloma or rheumatoid arthritis are other associated systemic conditions
- The lesions are caused by underlying small vessel thrombosis and vasculitis
- Diagnosis is usually apparent on clinical grounds, treatment is with systemic steroids, at a dose of around 60–100 mg of prednisolone per day, reducing as symptoms improve
- Vaseline-impregnated gauze dressings may also be helpful

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Difficulty: Average

Peer Responses

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Question 56 of 111

A 52-year-old obese man presents to the GP with a rash on his inner upper thigh. It consists of an erythematous plaque with a scaling border. The central part of the plaque appears to have partially cleared.

What diagnosis fits best with this clinical picture?

A	Candidiasis
B	Intertrigo
C	Psoriasis
D	Seborrhoeic dermatitis
E	Tinea cruris

Explanation

The answer is Tinea cruris –

- Tinea cruris is a dermatophyte fungal infection of the groin or thigh.
- It is most common during the summer months and men are affected more frequently than women.
- As with most other dermatophyte infections (also referred to as tinea or ringworm), an annular appearance with peripheral scaling is characteristic; occasional pustules may be seen in the active edge.
- Diagnosis is confirmed on a skin scraping by the demonstration of fungal hyphae on microscopy or by culture of the causative organism; usually dermatophytes of the genus *Trichophyton*, *Epidermophyton* or *Microsporum* are responsible.
- Species are variably anthropophilic, zoophilic or geophilic, acquired from contact with infected humans, animals or soil, respectively.
- Treatment is with topical antifungals (e.g. terbinafine, miconazole) for localised disease or with oral antifungals (e.g. terbinafine, itraconazole) for more severe cases.

Candidiasis (Option A) is incorrect. Candidiasis commonly affects moist, flexural areas, causing erythematous plaques sometimes with satellite lesions; annularity is absent.

Intertrigo (Option B) is incorrect. Intertrigo (inflammation in a skin fold) tends to occur in obese individuals: common sites include the inframammary area, groins and beneath the abdominal pannus; it can involve a variety of bacteria and yeasts, and leads to moist, inflamed plaques.

Psoriasis (Option C) is incorrect. Flexural psoriasis affects the actual flexures, rather than the upper thigh. The appearance can look very similar to intertrigo. There is often a fissure in the skin crease itself. It is usually symmetrical and there is no annularity.

Seborrhoeic dermatitis (Option D) is incorrect. Seborrhoeic dermatitis does cause redness and scaling, but is usually symmetrical. Annularity is not a feature. Typical sites include the scalp, eyebrows, nasolabial folds, central chest and back, and genitals.

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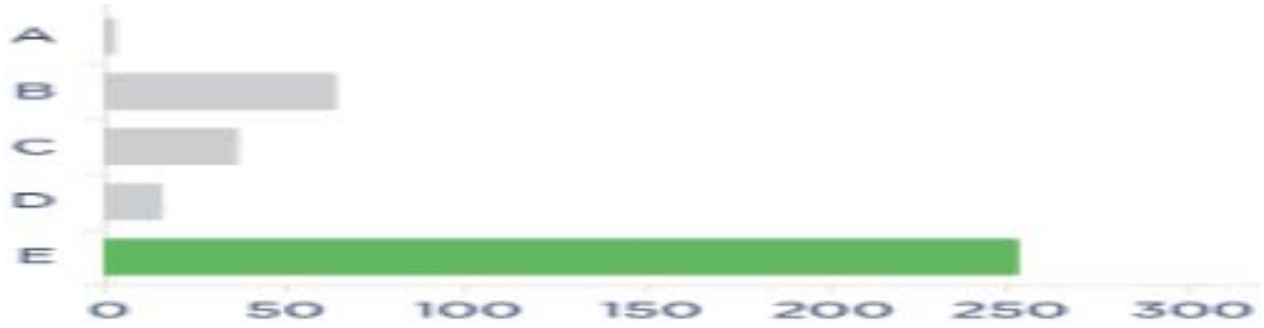

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Responses Correct:	0
Responses Incorrect:	111
Responses Total:	111
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Question 57 of 111

A 72-year-old Caucasian man consults for review. He is concerned about a raised mole-like lesion on the sole of his foot. It is over 1 cm across with an irregular edge and is surrounded by a ring of paler, but still pigmented, skin. Which diagnosis fits best with this clinical picture?

A	Acral lentiginous melanoma
B	Periungual melanoma
C	Lentigo maligna melanoma
D	Nodular melanoma
E	Superficial spreading melanoma

Explanation

Acral lentiginous melanoma

- The acral lentiginous melanoma is normally seen on the sole of the foot, and occasionally on the palm of the hand
- It is characterised by a raised darker area surrounded by a paler macular (lentiginous) area that may extend for several centimetres around the raised area

Other notes

- Periungual melanomas occur in the area of the nailbed
- Hutchinson's sign (brown pigmentation on the nailfold) is an important pointer to malignant melanoma
- Lentigo maligna melanoma occurs on the sun-exposed skin areas (usually the face) of elderly patients
- Superficial spreading melanoma is the commonest type, consisting of an irregular brown, black or blue–black lesion with some intermingled inflammation
- Central tumour regression may result in bizarre horseshoe-shaped lesions
- Nodular melanoma is the most rapidly growing and aggressive variant and may contain

relatively little melanin pigment

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Question 58 of 111

A 33-year-old woman reports changes in a mole on the left shin.

Which one of the following features is most suggestive of melanoma?

A	Bleeding
B	Cobblestoned surface
C	Depigmentation around the periphery
D	Multiple colours
E	New central elevation

Explanation

The answer is Multiple colours –

- Moles usually arise in childhood but can develop during puberty and sometimes later.
- Melanoma is a malignant tumour of melanocytes, which mostly arises de novo but may occur in a pre-existing mole.
- Signs of melanoma include asymmetry of pigmentation, irregularity in shape and border, and multiple colours; the history may indicate enlargement, increased irregularity, or darkening; bleeding without trauma should also raise suspicion.

Bleeding (Option A) is incorrect. As noted above, bleeding without trauma can be a sign of melanoma. However, most melanomas do not have a history of bleeding and minor trauma may go unnoticed until bleeding ensues. Multiple colours, if present, are a more reliable indicator.

Cobblestoned surface (Option B) is incorrect. A cobblestoned surface is commonly seen in benign compound naevi.

Depigmentation around the periphery (Option C) is incorrect. A mole surrounded by

depigmentation is termed a halo naevus and this is almost always benign.

New central elevation (Option E) is incorrect. Some moles go through a normal maturation process from junctional to compound to intra-dermal. The transition from junctional to compound naevus gives rise to elevation, which often begins centrally.

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Peer Responses

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Question 59 of 111

A 27-year-old woman attends the clinic for review. She is pale skinned and lived in Australia prior to moving to the UK. She is extremely concerned about a mole on her back.

Which of the following features would make you most concerned about a possible melanoma?

A	Diameter 7 mm
B	Regular border
C	Uniform pigmentation
D	Smoothly raised lesion
E	Blue-black in colour

Explanation

Melanoma

- The ABCDE criteria were developed as an educational tool about melanomas and they neatly summarise the features which raise the possibility of a malignant melanoma
- They are:
  - asymmetry
  - border irregularity
  - colour variability
  - diameter >6 mm
  - evolving lesion with changes over time
- Excision biopsy is a key component of diagnosing melanoma and determining prognosis which is related to the Breslow thickness of the lesion

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Difficulty: Average

Peer Responses

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Question 60 of 111

A 54-year-old woman visits her GP with a skin rash that has appeared a few days after commencing clarithromycin for a lower respiratory tract infection. She has multiple circular lesions, varying in size from 1 to 3 cm, with three different shades of red. Most of these are on the hands and feet. Some of the palmar lesions are blistering centrally.

What diagnosis fits best with this clinical picture?

A	Bullous drug eruption
B	Erythema multiforme
C	Erythema nodosum
D	Granuloma annulare
E	Pityriasis rosea

Explanation

The answer is Erythema multiforme –

- Erythema multiforme is a reactive eruption, which is charactised by target lesions (concentric rings with a least three hues per individual lesion); these tend to predominate at acral sites and mucosal involvement is common.
- It is typically associated with infection, most commonly herpes simplex virus; it can also follow mycoplasma infection as is likely in this scenario; it has been associated with a variety of other viral infections including HIV and hepatitis viruses.
- Occasionally, erythema multiforme occurs as a drug eruption: culprit drugs include anticonvulsants, sulfonamides, non-steroidal anti-inflammatory drugs and penicillins.

Bullous drug eruption (Option A) is incorrect. The term ‘bullous drug eruption’ is rather non-specific, as a variety of drug-induced rashes can lead to blistering. It is not particularly

unusual to see central blistering in lesions of erythema multiforme, which from the description in the scenario is clearly the diagnosis. Even if the case was clearly bullous erythema multiforme secondary to a drug, bullous drug eruption would not be sufficiently accurate as a diagnosis.

Erythema nodosum (Option C) is incorrect. Erythema nodosum is a reactive panniculitis that gives rise to tender lumps usually on the shins.

Granuloma annulare (Option D) is incorrect. Granuloma annulare gives rise to annular plaques (annular means ring-like, such that the centre of the lesion is relatively clear and the border relatively pronounced). Scaling is not seen. It is usually asymptomatic. It is more commonly seen in patients with diabetes.

Pityriasis rosea (Option E) is incorrect. Pityriasis rosea begins with a 'herald patch', which is followed after a few days by a widespread truncal eruption of plaques with fine peripheral scaling. These are classically arranged in a Christmas tree configuration. The rash is typically asymptomatic and resolves after a few weeks. The cause is thought to be viral.

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Peer Responses

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Question 61 of 111

A 24-year-old woman with type 1 diabetes presents for review. She presents with small, intensely itchy, excoriated papules with a few vesicles. These are particularly present on her elbows, extensor forearms and buttocks. She has been treated in the past for chronic diarrhoea, presumed to be due to diabetic neuropathy.

What diagnosis fits best with this clinical picture?

A	Dermatitis herpetiformis
B	Eczema
C	Epidermolysis bullosa
D	Folliculitis related to diabetes
E	Linear IgA disease

Explanation

The answer is Dermatitis herpetiformis –

- The clinical description is classical for dermatitis herpetiformis, which most commonly begins in early adulthood; vesicles are usually quickly excoriated so may not be seen.
- HLA associations (B8, DR3, DQ2 in 80–90% of cases) are similar to those for coeliac disease, which virtually always co-exists.
- Skin biopsy reveals subepidermal blisters with neutrophil microabscesses in the dermal papillae.
- On immunofluorescence, there is positive granular staining for IgA in the dermal papillae.
- The patient should have appropriate investigations for coeliac disease; particularly in this case, where there is a history of diarrhoea, there is likely to be villous atrophy on jejunal biopsy.
- Treatment is with a gluten-free diet; control of the skin disease may also require

dapsone or other sulfur drugs.

+ Dapsone may cause haemolysis and methaemoglobinaemia, as well as liver pathology and polyneuropathy, so regular monitoring of both liver enzymes and blood count is necessary; it is also associated with drug reaction with eosinophilia and systemic symptoms (DRESS).

Eczema (Option B) is incorrect. Eczema is typically itchy, but the clinical signs described in the scenario do not suggest it – ill-defined, erythematous plaques with fine scale would be typical.

Epidermolysis bullosa (Option C) is incorrect. There are various forms of epidermolysis bullosa, which may be congenital or occasionally acquired. It typically leads to blistering at sites of minor trauma such as the hands and feet, although types range in severity from trivial to devastating.

Folliculitis related to diabetes (Option D) is incorrect. Folliculitis, which is usually due to staphylococcal infection, presents with pustules rather than vesicles and is not usually pruritic.

Linear IgA disease (Option E) is incorrect. Linear IgA disease is a rare immunobullous disease, which is sometimes secondary to drugs; blisters can range in size, and classically occur in an annular configuration. The level of pruritus is variable, but it is not typically as itchy as dermatitis herpetiformis.

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Question 62 of 111

A 22-year-old woman presents with an intensely itchy rash, particularly affecting her scalp, buttocks, elbows and knees. The lesions formed are either papules or blisters up to 1 cm across, and intense itching can pre-date the appearance of new lesions by a few hours. She has also suffered from diarrhoea which has waxed and waned over the past few months. The GP suspects the rash may be dermatitis herpetiformis and arranges a skin biopsy. Which one of the following immunoglobulins is likely to be found on immunostaining of the skin sample?

A	IgA
B	IgG
C	IgD
D	IgM
E	IgE

Explanation

Dermatitis herpetiformis

- This patient has dermatitis herpetiformis, which is characterised by subepidermal blisters, inflammatory cells grouped in the dermal papillae and IgA deposits within the dermal papillae revealed on immunostaining
- There is an association with coeliac disease, which may also explain the presence of intermittent diarrhoea in this patient and she should be screened with antibody testing for coeliac
- A gluten-free diet may improve skin symptoms, dapsone is the pharmacological treatment of choice for dermatitis herpetiformis

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Difficulty: Average

Peer Responses

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Question 63 of 111

A middle-aged man is referred with itchy papules on his back and chest, along with nail dystrophy. His father had a similar eruption. Which one of the following is the most likely diagnosis?

A	Darier disease
B	Lichen planus
C	Pemphigus foliaceus
D	Psoriasis
E	Seborrhoeic dermatitis

Explanation

Darier disease

- All five items can occur on the back and chest
- However, only items Darier disease and lichen planus give rise to itchy papules
- The positive family history makes Darier disease the most likely diagnosis

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Question 64 of 111

A 25-year-old woman presents with an intensely painful, rapidly spreading facial rash. She describes flu-like symptoms with a fever and chills, which began a couple of days before the rash appeared. On examination she is pyrexial at 37.8°C, and claims that the rash has worsened even in the past few hours. She has a severe superficial skin infection over the left hand side of the face with induration, erythema and a sharply demarcated border. Which one of the following organisms is the most likely cause?

A Group A *Streptococcus*

B *Staphylococcus aureus*

C *Staphylococcus epidermidis*

D Herpes zoster infection

E Group G *Streptococcus*

Explanation

Erysipelas

- This clinical picture is typical of erysipelas, the commonest cause of which is group A streptococcal infection, although other streptococci may be causative organisms
- The typical history is of a superficial rapidly spreading skin rash characterised by a well-demarcated border, intense erythraemia and induration
- Mortality rate for erysipelas is less than 1%, although this may be higher in immunocompromised, very young or very old patients
- Penicillin iv or oral penicillin V are the treatments of choice for this condition

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Question 65 of 111

A 45-year-old man is admitted to hospital with a diagnosis of mycoplasma pneumonia. Which one of the following rashes is most likely to occur with this type of pneumonia?

A	Erythema multiforme
B	Erythema nodosum
C	Epidermolysis bullosa
D	Pityriasis rosea
E	Urticaria

Explanation

Erythema multiforme and pneumonia

- Erythema multiforme (EM) is an acute self-limiting and often recurrent condition affecting the skin and the mucosal surfaces
- It is associated with
  - mycoplasma pneumonia
  - herpes simplex infections
  - sulphonamides
  - sulphonylurea derivatives
  - barbiturates
  - tuberculosis
  - histoplasmosis
- These are symmetrical erythematous papules that evolve into concentric rings of varying colour
- The rash is commonly seen on the back of the hands, palms and forearms
- The lesion may show a central pallor associated with oedema, bullae formation and peripheral erythema
- The Stevens–Johnson syndrome describes a severe form of EM with widespread bullous disease associated with oral and genital ulceration

2492

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Difficulty: Easy

Peer Responses

Session Progress

Responses Correct:	0
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Responses Total:	111
Responses - % Correct:	0%

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Question 66 of 111

A 34-year-old man who works as a dog breeder presents with a bald patch on his scalp. He has noticed it increasing in size over the past couple of weeks and the area is beginning to itch. On examination there is inflammatory change and some skin scaling. Examination under Wood's light reveals bright green immunofluorescence. Which diagnosis fits best with this clinical picture?

A *Microsporum canis* infection

B *Tinea rubrum* infection

C Alopecia areata

D *Tinea cruris*

E Psoriasis

Explanation

Dermatophyte infections

- *Tinea capitis* may commonly be owing to *T. tonsurans*, *M. canis*, *T. rubrum* or *T. verrucosum* dermatophyte infection

Diagnosis

- *M. canis* is a zoophilic dermatophyte and so this man's occupation as a dog breeder may well be relevant to mode of transmission here
- *M.canis* and *M. audounii* display characteristic brilliant green fluorescence when illuminated under Wood's light (UV light with a wavelength > 365 nm)
- Diagnosis of dermatophyte infection is confirmed via direct microscopy of scrapings suspended in potassium hydroxide, rarely will additional culture of skin scrapings be needed to confirm the diagnosis

Management

- Dermatophyte infections on the body are usually managed with a topical preparation such as miconazole or ketoconazole
- More severe dermatophyte infections, or persistent tinea capitis, are managed with griseofulvin at a daily dose of 1 g for adults.
- In general, prolonged treatment for up to 4–6 weeks in adults is required to treat scalp or body lesions, and up to 6 months for nail infections

3346

Next Question

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Difficulty: Average

Peer Responses

Session Progress

Responses Correct:	0
Responses Incorrect:	111
Responses Total:	111
Responses - % Correct:	0%

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Question 67 of 111

A 75-year-old man presents with an enlarging pigmented lesion. Histology confirms malignant melanoma.

Which one of the following is the most helpful in estimating his prognosis?

A	Depth of the tumour
B	Diameter of the tumour
C	Melanoma subtype
D	Number of other melanocytic lesions
E	Performance status

Explanation

The answer is Depth of the tumour –

This is a malignant tumour of melanocytes, which can affect all ages. It can arise in a pre-existing mole or de novo. It is a significant killer of young people but potentially curable if excised early. Various prognostic factors have been recognised in pre-metastatic melanoma.

The most important of these is the Breslow thickness. This is the depth of the tumour measured by the histopathologist from the granular layer of the epidermis to the deepest area of involvement. The thicker the tumour is at excision, the higher the associated mortality. Ulceration is another poor prognostic sign.

Diameter of the tumour (Option B) is incorrect. Diameter of the tumour is unhelpful prognostically. Melanoma usually goes through a radial growth phase, during which it enlarges horizontally. For reasons that are not understood, it then enters a vertical growth phase, associated with a relatively rapid increase in Breslow thickness and worsening of prognosis.

Melanoma subtype (Option C) is incorrect. Subtypes of melanoma include superficial spreading, nodular, acral lentiginous (including subungual) and lentigo maligna melanoma (LMM). In general, LMM tends to develop slowly with a prolonged in situ (lentigo maligna)

phase, whereas nodular melanoma lacks a horizontal growth phase. Subungal melanoma does tend to carry a relatively worse prognosis, but this is due to more advanced disease at diagnosis. In each case, the prognosis is more related to the Breslow thickness than the subtype itself.

Number of other melanocytic lesions (Option D) is incorrect. The number of other melanocytic lesions has no bearing on the prognosis of a specific melanoma. However, those with very large numbers of moles, particularly atypical lesions, are more likely to develop melanoma in the first place and more at risk of acquiring a second primary.

Performance status (Option E) is incorrect. Various assessments of performance status are used by oncologists who treat advanced cancers including melanoma. These may inform how well an individual patient is likely to tolerate treatments such as chemotherapy or radiotherapy. They are not helpful in the scenario above, as the primary management of melanoma is wide local excision. This is almost always achievable under local anaesthesia.

46402

Next Question

Previous Question Tag Question Feedback End Review

Difficulty: Average

Peer Responses

Session Progress

Responses Correct:	0
Responses Incorrect:	111
Responses Total:	111
Responses - % Correct:	0%

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Question 68 of 111

A 19-year-old student comes to the Emergency Department complaining of a generalised skin rash. He suffered from a sore throat 2 weeks earlier for which he was prescribed some penicillin via the student health service. He is worried, as on further questioning he admits to having had oral sex with a new partner just a few days before becoming unwell. On examination he is apyrexial. His pharyngitis has resolved, he has multiple papules and scaly red plaques on his body, ranging from a few millimetres to around 10-15 mm in diameter. He says these are mildly itchy. The table below contains the investigation results.

Hb	12.4 g/dl
WCC	9.1×10^9/litre
PLT	230×10^9/litre
Na^+	139 mmol/litre
K^+	4.4 mmol/litre
Creatinine	100 µmol/litre

Which one of the following is the most likely diagnosis?

A Secondary syphilis

B Guttate psoriasis

C Penicillin allergy

D Rheumatic fever

E Reactive arthritis

Explanation

Guttate psoriasis

- Guttate psoriasis follows upper respiratory tract infection, and streptococcal infection in particular

Symptoms

- The rash normally appears around 2 weeks after the antecedent infection, and it appears very acutely with multiple papules/small plaques appearing within a very short time
- The palms and soles are usually spared and the diagnosis is a clinical one

Treatment

- The condition normally resolves over the course of a few weeks, and simple emollients are often the only treatment required
- For resistant cases topical steroids or UV light therapy may be of value

22454

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Difficulty: Average

Peer Responses

Session Progress

Responses Correct:	0
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Question 69 of 111

A middle-aged man presents with hyperpigmentation of his forehead, excessive hair growth and a blistering scarring eruption on the dorsal aspect of both hands. This is worse in the summer. He is not on any medication but he drinks alcohol excessively. Which one of the following is the most expedient test in the clinic to make a diagnosis?

A Check faecal porphyrins

B Check serum ferritin

C Check serum porphyrins

D Check urine porphyrins

E Check urine with an ultraviolet light

Explanation

Diagnosing porphyria cutanea tarda

- All the tests are useful to diagnose porphyria cutanea tarda, but in the clinic, examination of urine with a Wood's lamp would clinch the diagnosis as the urine shows a pink fluorescence
- Porphyrins (which are present in the urine in this situation), fluoresce pink under UV light. Uroporphyrinogen decarboxylase deficiency leads to increased uroporphyrins, a hallmark of the condition

3152

Next Question

Previous Question Tag Question Feedback End Review

Difficulty: Difficult

Peer Responses

Session Progress

Responses Correct:	0
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Responses - % Correct:	0%

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Question 70 of 111

A patient presents with multiple cutaneous nodules, predominantly on his trunk, but also on his hands and face. He also has a number of café-au-lait spots, and the GP reports axillary freckling. The GP is concerned that he may have neurofibromatosis type 1. Which one of the following is usually associated with neurofibromatosis type 1?

A A gene defect on chromosome 17

B Juvenile cataracts

C Schwannomas

D Hyperparathyroidism

E Medullary carcinoma of the thyroid

Explanation

Neurofibromatosis

- Juvenile cataracts and schwannomas are usually associated with neurofibromatosis type 2
- Café-au-lait spots, axillary/inguinal freckles, neurofibromas, optic nerve gliomas, Lisch nodules and sphenoid dysplasia are all seen with neurofibromatosis type 1
- Hypertension is strongly associated with neurofibromatosis type 1; while the usual cause is essential hypertension, phaeochromocytomas also occur more commonly in association with the condition, and should be excluded if hypertension is present

21348

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Difficulty: Average

Peer Responses

Session Progress

Responses Correct:	0
Responses Incorrect:	111
Responses Total:	111
Responses - % Correct:	0%

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Question 71 of 111

A 35-year-old Mediterranean woman complains of a facial rash that has been present for the last 6 months. She has been living in the UK for 8 months. Examination shows two to three macular, erythematous lesions and pale-pink nodules on her face, she has also suffered from some symptoms of nasal obstruction. What is the most likely diagnosis?

A	Systemic lupus erythematosus
B	Lupus vulgaris
C	Rosacea
D	Cutaneous leishmaniasis
E	Leprosy

Explanation

Cutaneous leishmaniasis

- Cutaneous leishmaniasis also called ‘oriental sore’ is due to *Leishmania tropica*
- It is endemic in the Mediterranean area and may also be seen in North Europeans after Mediterranean holidays
- The incubation period varies between 1 and 12 months and the lesion is usually seen on the face
- Nodules that may ulcerate or erythematous lesions are characteristically present
- A chronic form may develop
- Diagnosis depends on microscopy of scrapings and biopsy for histopathology and culture
- Pentavalent antimony compounds are the drugs of choice e.g. sodium stibogluconate

2493

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Difficulty: Difficult

Peer Responses

Session Progress

Responses Correct:	0
Responses Incorrect:	111
Responses Total:	111
Responses - % Correct:	0%

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Question 72 of 111

A 60-year-old lady presents with a 4-week history of generalised rash. She complains of areas of erythema and blistering, although only excoriations are visible today. On further questioning she also admits to difficulty swallowing and pain on passing urine. Her past medical history includes angina and coeliac disease. Her medication includes aspirin, atenolol and hydralazine. She is subsequently reviewed by the dermatologists who perform a skin biopsy. The immunofluorescence results show immunoglobulin G (IgG) staining in the intercellular substance. What is the most likely diagnosis?

A	Epidermolysis bullosa
B	Pemphigoid
C	Pemphigus
D	Dermatitis herpetiformis
E	Allergic reaction

Explanation

Pemphigus

- Pemphigus occurs in middle age between the ages of 40 and 60 years
- It is common in eastern countries and also in Jewish populations
- It is characterised by flaccid blisters that rupture easily as compared with the tense blisters seen in pemphigoid
- Pemphigus also tends to involve the mucus membranes and patients may complain of pain on eating
- The diagnosis is confirmed with immunofluorescence, which shows antibodies to the cells in the epidermis, while pemphigoid will show antibodies directed at the basement membrane
- Anti-desmoglein antibodies (Types 1 and 3), can actually be measured in peripheral blood in some centres in patients with pemphigus
- Pemphigoid is associated with C3 deposition, and antibodies are generated against

type 17 collagen

- When large areas of skin are lost in pemphigus, fluid loss can produce severe metabolic changes
- Treatment therefore includes accurate fluid control as well as high-dose steroids often for prolonged periods of time

8539

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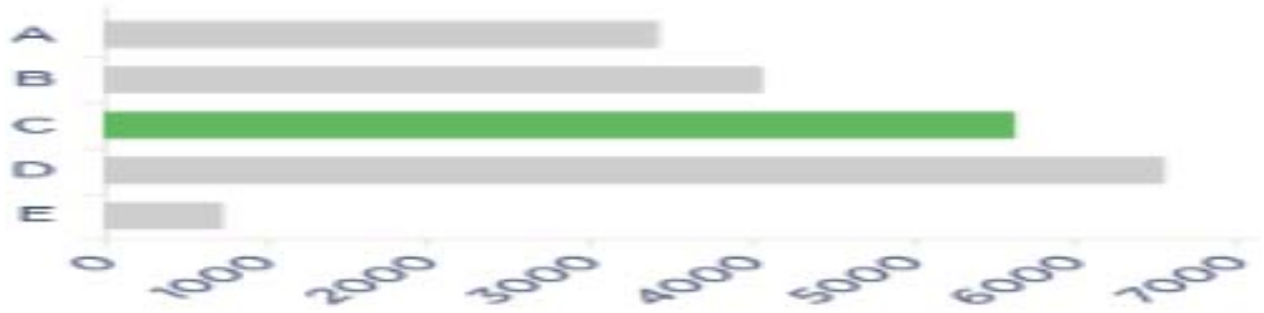
Difficulty: Difficult

Peer Responses



Session Progress

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Responses Incorrect:	111
Responses Total:	111
Responses - % Correct:	0%

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Question 73 of 111

A 59-year-old man develops a rash, comprising large erythematous, scaly plaques at multiple sites. He has a history of hypertension, angina, rectal cancer and knee pain diagnosed as osteoarthritis.

Which one of the following is true regarding psoriasis?

A	It affects 4–8% of the world population
B	It is an independent risk factor for cardiovascular disease
C	It suggests underlying abdominal malignancy
D	It usually improves after infection with HIV
E	Psoriatic arthropathy occurs in over 70% of people with psoriasis

Explanation

The answer is It is an independent risk factor for cardiovascular disease –

Psoriasis is a very common dermatosis, which presents with well-defined erythematous, scaly plaques of varying sizes. It has a predilection for extensor surfaces and also commonly affects the scalp.

It has been shown in various studies to be associated with obesity, hypertension, hyperlipidaemia, type II diabetes, metabolic syndrome, and specifically cardiovascular disease including myocardial infarction.

It affects 4–8% of the world population (Option A) is incorrect. Psoriasis affects 2–3% of the population.

It suggests underlying abdominal malignancy (Option C) is incorrect. Psoriasis has been variably associated with an increased risk of certain malignancies, but it appears that the consequences of its immunosuppressive treatment are more relevant than the disease itself.

It usually improves after infection with HIV (Option D) is incorrect. Psoriasis tends to deteriorate in association with HIV infection.

Psoriatic arthropathy occurs in over 70% of people with psoriasis (Option E) is incorrect. Estimates of the prevalence of psoriatic arthritis in patients with psoriasis vary widely from around 6 to 42%.

46394

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Difficulty: Average

Peer Responses

Session Progress

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Question 74 of 111

A 25-year-old pregnant woman complains of painful lumps on her shins for the last 2 weeks. She is 32 weeks' pregnant and suffers from asthma, which is well controlled with inhalers. Examination shows tender red nodules over her shins.

What is the most likely diagnosis?

A	Cellulitis
B	Drug eruption
C	Erythema multiforme
D	Erythema nodosum
E	Granuloma annulare

Explanation

The answer is Erythema nodosum –

- Erythema nodosum is an acute panniculitis (inflammation in the fat) that produces tender nodules or plaques on the shins and occasionally elsewhere.
- Lesions are usually well circumscribed. The overlying skin is erythematous but otherwise normal, with no scaling. Firm induration is typical and the lesions may be exquisitely tender.
- It may be idiopathic, but is associated with:
  - Sarcoidosis
  - Inflammatory bowel disease
  - Streptococcal infections
  - Tuberculosis
  - Treatment with sulfonamides or the oral contraceptive pill
  - Pregnancy.
- Treatment is usually with non-steroidal anti-inflammatory drugs.

Cellulitis (Option A) is incorrect. Cellulitis presents with confluent erythema and swelling. Although it is most common on the leg, it is almost always unilateral, does not lead to discrete nodules and pain or tenderness are not typically severe.

Drug eruption (Option B) is incorrect. Drug eruptions can present in many different ways, most commonly with a widespread exanthem (a morbilliform or maculopapular eruption). Inhaled drugs for asthma are exceptionally unlikely to lead to drug eruptions. Although erythema nodosum can be precipitated by certain drugs, this rather than drug eruption is clearly the best answer.

Erythema multiforme (Option C) is incorrect. Erythema multiforme presents with target lesions mostly at acral sites. It commonly affects the oral mucosa. It is a reactive condition and is most closely associated with herpes simplex virus infection.

Granuloma annulare (Option E) is incorrect. Granuloma annulare gives rise to annular plaques (annular means ring-like, such that the centre of the lesion is relatively clear and the border relatively pronounced). Scaling is not seen. It is usually asymptomatic. It is more commonly seen in patients with diabetes.

46387

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Difficulty: Average

Peer Responses

Session Progress

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Responses Incorrect:	111
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Responses - % Correct:	0%

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Question 75 of 111

A 21-year-old woman is admitted to the hospital with a 1-hour history of sudden onset breathlessness. This was accompanied by abdominal pain. She also has an erythematous rash, which developed 24 hours earlier. In the Emergency Department she is mildly distressed and has an audible wheeze. There is no past medical history of significance. Her family history is unavailable as she was adopted when she was 2 years old. As she has deteriorated, the intensivists decide to intubate and ventilate her. She has suffered from two previous episodes like this over the past 4 years. Which one of the following investigations is most likely to help reach a diagnosis?

A	CT thorax
B	Cold agglutinins
C	Arterial blood gases
D	Mycoplasma serology
E	C1 esterase inhibitor level

Explanation

Diagnosing hereditary angio-oedema

- The history is suggestive of hereditary angio-oedema, which is inherited in an autosomal-dominant manner
- It is due to C1 esterase inhibitor deficiency, which modulates the intravascular activation of complement. Clinical features may not appear until adult life
- A non-hereditary acquired form of the disease occurs in association with lymphoproliferative disorders
- The other options (e.g. mycoplasma or cold agglutinins suggestive of infection) would be associated with a more subacute presentation
- Arterial blood gases, whilst potentially showing hypoxia, would be non-specific with respect to determining the underlying cause of the SOB

Symptoms

- A prodromal rash, evident as mild erythema or erythema marginatum, may precede attacks
- Patients present with airway obstruction and abdominal pain secondary to visceral oedema

Treatment

- Acute attacks may respond to fresh-frozen plasma
- Long-term treatment is with stanazol or danazol

2489

Next Question

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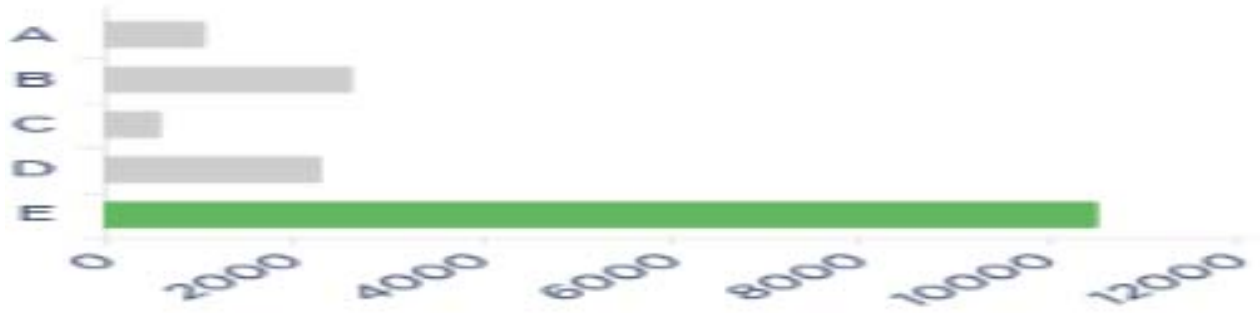
Difficulty: Average

Peer Responses



Session Progress

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Responses - % Correct:	0%

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Question 76 of 111

A 40-year-old man is referred with itchy violaceous rash in his flexural creases on his arms and legs and in his mouth. He has noticed a similar rash in a recent scar. Examination shows red scaly thickened plaques affecting the palms and soles. Which one of the following is the most likely diagnosis?

A	Lichen planus
B	Pompholyx
C	Pustular psoriasis
D	Scabies
E	Tinea infection

Explanation

Diagnosing lichen planus

- The clinical features make lichen planus the most likely diagnosis
- Psoriasis, not pustular psoriasis, could have similar features, although this tends not to be itchy
- Pompholyx presents with itchy vesicles
- Tinea would not, in general, affect both palms and soles

3147

Next Question

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Difficulty: Average

Peer Responses

Session Progress

Responses Correct:	0
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Responses Total:	111
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Question 77 of 111

A 67-year-old man has been diagnosed with Kaposi's sarcoma of the legs and feet. Which one of the following best describes the typical clinical picture of this tumour?

A Kaposi's sarcoma can affect elderly non-immunosupressed men

B It does not spread to the lymph glands

C It can be contained by surgical excision

D Patients usually complain of severe nocturnal itching

E It does not affect survival

Explanation

Kaposi's sarcoma

- In its classical form, this is a rare tumour of elderly men
- It is a tumour of multicentric origin with vascular endothelial and fibroblastic elements
- It usually begins on the foot and spreads up the leg
- It causes oedema of the lower limbs due to lymphatic obstruction and may spread to the lymph nodes
- After a course of 10 years, it is eventually fatal but can often be contained by judicious local radiotherapy
- The lesions are blue-red, firm, warty and neither painful nor itchy
- Nowadays it is typically seen in young HIV-positive men
- Lesions of the tip of the nose, neck and buccal mucosa are common in this group of patients

2599

Next Question

Previous Question Tag Question Feedback End Review

Difficulty: Average

Peer Responses

Session Progress

Responses Correct:	0
Responses Incorrect:	111
Responses Total:	111
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Question 78 of 111

A 71-year-old obese woman presents for review. Her past history has been unremarkable apart from a deep venous thrombosis suffered some years ago. On examination there is an ulcer over the left medial malleolus, with fibrosis and purpura of the surrounding skin. What is the diagnosis that fits best with this particular clinical picture?

A	An arterial ulcer
B	A venous ulcer
C	Trauma to the medial malleolus
D	A neuropathic ulcer
E	A vasculitic ulcer

Explanation

Venous ulcers

- Venous leg ulcers are very common in the UK and account for around 3% of all new cases attending dermatological clinics
- Many other patients are managed by their GP and community nursing services

Incidence and occurence

- The incidence of venous leg ulceration is higher in
  - obese patients
  - those with a history of varicose veins
  - where there is a history of deep vein thrombosis
- Ulcers occur owing to
  - venous stasis
  - secondary increase in capillary pressure
  - fibrosis
  - poorly nourished skin particularly over areas such as the medial malleolus
- This process, coupled with minor trauma, then results in venous ulceration

Therapy

- Treatment is designed to reduce ulcer exudates and promote healing of the lesion using dressings such as Granuflex or Sorbisan, and to prevent further ulcers
- Preventive therapy may include prophylactic bandaging or even surgical treatment of varicose veins

3349

Next Question

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Difficulty: Easy

Peer Responses

Session Progress

Responses Correct:	0
Responses Incorrect:	111
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Responses - % Correct:	0%

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Question 79 of 111

A 23-year-old homosexual man visits a local GP while on holiday in the UK from Australia. He has noted a lesion on his penis that was initially nodular and painless, but has progressed over time to form a heaped-up ulcer. Sampling from the lesion reveals large, infected, mononuclear cells containing many Donovan bodies.

What diagnosis fits best with this clinical picture?

A Chancroid

B Genital herpes

C Granuloma inguinale

D Lymphogranuloma venereum

E Penile carcinoma

Explanation

The answer is Granuloma inguinale –

- Granuloma inguinale is an infection caused by *Klebsiella granulomatis* (previously known as *Calymmatobacterium granulomatis*). This is a Gram-negative bacillus that reproduces within neutrophils, plasma cells and histiocytes, causing the infected white cells to rupture with the release of 20–30 organisms.
- The key features are a primary, painless, indurated nodule that progresses to a heaped-up ulcer, and the presence of infected mononuclear cells containing many Donovan bodies (the infection is also known as donovanosis).
- The infection is endemic in Australia, India, the Caribbean and parts of Africa, and transmission is associated with unprotected sexual intercourse.
- Treatment is usually with doxycycline or trimethoprim-sulfamethoxazole, and patients are advised to refrain from sexual intercourse until the lesion has healed.
- Follow-up is advised to ensure complete resolution.

Other options

+ The finding of Donovan bodies invalidates all of the other options.

Chancroid (Option A) is incorrect. Chancroid is caused by infection with Haemophilus ducreyi and leads to genital ulcers and lymphadenopathy, both of which are painful. It mainly occurs in Africa, the Caribbean and Southwest Asia.

Genital herpes (Option B) is incorrect. Genital herpes causes multiple painful vesicles which may result in erosions.

Lymphogranuloma venereum (Option D) is incorrect. Lymphogranuloma venereum results from specific *Chlamydia* strains. It begins with painless papules or ulcers, which quickly heal. These are followed several weeks later by painful enlargement of the inguinal lymph nodes (known as buboes).

Penile carcinoma (Option E) is incorrect. Penile carcinoma is much more common in older patients.

46412

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Previous Question Tag Question Feedback End Review

Difficulty: Average

Peer Responses

Session Progress

Responses Correct:	0
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Question 80 of 111

A 44-year-old woman has been admitted to hospital with pneumonia. She has now developed a rash on the palms and soles made up of lesions with concentric erythematous rings. She also complains of painful mouth ulcers.

What is the diagnosis?

A	Erythema multiforme
B	Erythema nodosum
C	Fixed drug eruption
D	Pemphigus vulgaris
E	Toxic epidermal necrolysis

Explanation

The answer is Erythema multiforme –

- Erythema multiforme is a reactive eruption, which is charactised by target lesions (concentric rings with a least three hues per individual lesion); these tend to predominate at acral sites and mucosal involvement is common.
- It is typically associated with infection, most commonly herpes simplex virus; it can also follow mycoplasma infection, as is likely in this scenario; it has been associated with a variety of other viral infections, including HIV and hepatitis viruses.
- Occasionally, erythema multiforme occurs as a drug eruption: culprit drugs include anticonvulsants, sulfonamides, non-steroidal anti-inflammatory drugs and penicillins.

Erythema nodosum (Option B) is incorrect. Erythema nodosum is a reactive panniculitis that gives rise to tender lumps usually on the shins.

Fixed drug eruption (Option C) is incorrect. Fixed drug eruption leads to one or more

discrete macules or plaques, sometimes with central blistering, following exposure to the causative drug; on rechallenge, the lesions reappear at exactly the same site.

Pemphigus vulgaris (Option D) is incorrect. Pemphigus vulgaris is an immunobullous disease, which presents with superficial blistering and erosions, affecting skin and mucosal surfaces.

Toxic epidermal necrolysis (Option E) is incorrect. Toxic epidermal necrolysis, the most severe form of drug eruption, leads to extensive skin loss with mucosal involvement; it overlaps with Stevens–Johnson syndrome and, although 'targetoid' lesions may be seen, true target lesions, as described above, are not a feature.

46393

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Difficulty: Average

Peer Responses

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A 30-year-old man gives a history of recurrent blistering on the hands, forearms and chest whenever he is on holiday, and mentions that lesions develop after sun exposure. He has numerous scars on his hands, forearms and upper chest. He is a fit man and works as an interior decorator. He drinks approximately 30–40 units of alcohol per week and does not smoke.

What is the diagnosis?

A	Bullous pemphigoid
B	Pemphigus vulgaris
C	Polymorphic light eruption
D	Porphyria cutanea tarda
E	Sunburn

Explanation

The answer is Porphyria cutanea tarda –

- Porphyria cutanea tarda presents with bullous eruptions after exposure to sunlight.
- The eruptions heal with scarring and milia (tiny inclusion cysts).
- Clues to the diagnosis include the photodistribution of the rash, skin fragility, blistering and the presence of scars; other features can include hypertrichosis and sclerodermatous changes.
- Most patients will have chronic liver disease, most commonly due to alcohol.
- Diagnosis depends on the presence of increased levels of urinary uroporphyrin.
- Remission can be induced by venesection.
- Chloroquine promotes the urinary excretion of uroporphyrin but must be used in very low doses in the context of chronic liver disease.

Bullous pemphigoid (Option A) is incorrect. Bullous pemphigoid affects a much older age group and is not related to sun exposure.

Pemphigus vulgaris (Option B) is incorrect. Pemphigus vulgaris leads to superficial blistering and usually presents with erosions rather than intact blisters. It always causes mucosal involvement and is not photodistributed.

Polymorphic light eruption (Option C) is incorrect. Polymorphic light eruption, as the name suggests, can lead to various morphologies of rash after sun exposure. Although blistering is possible, it is not typical and does not lead to scarring. It is much more common in women than men.

Sunburn (Option E) is incorrect. The eruption sounds excessive for sunburn and there is no suggestion that the patient has been taking any photosensitising agents. Sunburn does not lead to scarring.

46389

Next Question

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Difficulty: Average

Peer Responses

Session Progress

Responses Correct:	0
Responses Incorrect:	111
Responses Total:	111
Responses - % Correct:	0%

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Question 82 of 111

A 25-year-old man presents with bilateral ankle pain and swelling. He has red raised lesions on both his shins. He is usually fit and well, and works as a lawyer. The only history of note is a pharyngitis which preceded the symptoms. The table below contains the investigation results.

Hb	11.5 g/dl
WCC	6.4×10^9/litre
PLT	176×10^9/litre
ESR	48 mm/hr
Na^+	139 mmol/litre
K^+	4.2 mmol/litre
Creatinine	110 µmol/litre

Which one of the following is the most likely clinical outcome?

A Spontaneous resolution

B He is likely to develop bilateral sacroiliitis

C He is likely to develop Inflammatory bowel disease

D He is likely to develop enteropathy

E He is likely to develop signs of tuberculosis

Explanation

Erythema nodosum

- This man is suffering from erythema nodosum, the commonest causes of which are sarcoidosis in adults, and streptococcal infection, both in adults and children
- As such, resolution is the most likely outcome
- There are no other symptoms to suggest sarcoid here

- Other associations of erythema nodosum include
  - tuberculosis
  - inflammatory bowel disease
  - ankylosing spondylitis

- Symptomatic relief of pain, using NSAIDs is the management of choice for this condition, as the majority of patients experience spontaneous resolution

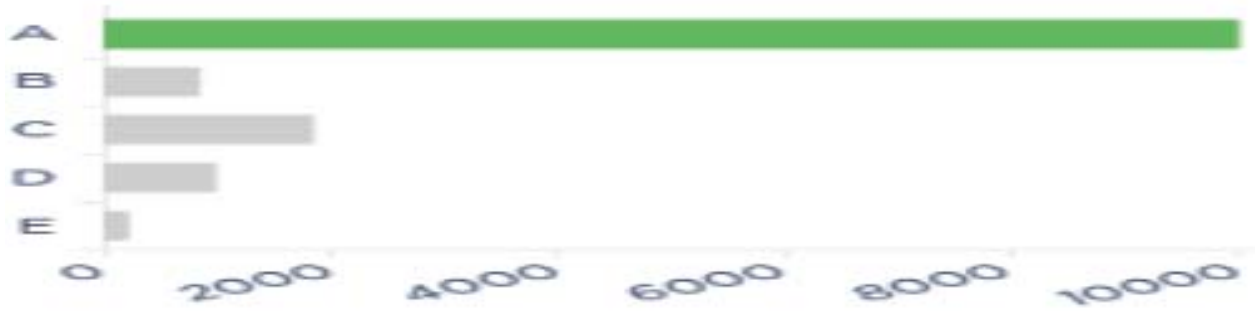
20753

Next Question

Previous Question | Tag Question | Feedback | End Review

Difficulty: Easy

Peer Responses



Session Progress

Responses Correct:	0
Responses Incorrect:	111
Responses Total:	111
Responses - % Correct:	0%

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Question 83 of 111

A 25-year-old man presents with a well-defined patch of hair loss on the scalp surrounded by 'exclamation mark' hairs. The scalp skin appears normal.

What is the most likely diagnosis?

A	Alopecia areata
B	Discoid lupus erythematosus
C	Telogen effluvium
D	Tinea capitis
E	Trichotillomania

Explanation

The answer is option Alopecia areata –

- Alopecia areata typically causes single or multiple, discrete, often round areas of complete baldness. It most commonly occurs on the scalp, but can affect the face or any hair-bearing part of the body. It is a form of non-scarring alopecia and lost hair may therefore regrow.

Signs of disease

- Exclamation mark hairs – short, tapered hairs of a few millimetres in diameter are characteristic.
- There may be nail pitting.

Autoimmune associations

- Alopecia areata is considered to be an autoimmune disease and may be seen in association with other diseases such as:

- Vitiligo
- Thyroid disease
- Pernicious anaemia
- Rheumatoid arthritis
- Diabetes.

- No specific antibody has been identified.
- Approximately one-third of patients have a positive family history, implying that a genetic component is involved.

Prognosis

- The condition is very unpredictable. Many patients experience hair regrowth within 6–12 months – new hair is often fine and initially white; some find that new areas of alopecia appear as older ones regrow; others have a more progressive pattern.
- Some cases progress to complete loss of scalp hair (alopecia totalis) and occasionally complete loss of all hair (alopecia universalis).

Treatment

Alopecia areata is difficult to treat. Possible options include:

- Topical or intra-lesional steroids
- Topical minoxidil
- Contact allergen therapy
- Janus kinase inhibitors are a possible new avenue for treatment
- Some patients will benefit from a hairpiece or wig, false eyelashes or eyebrow tattooing.

Discoid lupus erythematosus (Option B) is incorrect. Discoid lupus erythematosus (DLE – also known as chronic cutaneous LE) is a form of scarring alopecia which causes well-defined erythematous plaques with scaling, atrophy and follicular plugging; these affect light-exposed areas of the body and are exacerbated by sunlight.

Telogen effluvium (Option C) is incorrect. Telogen effluvium is a cause of transitory, generalised, diffuse hair loss over the scalp; it is a disorder of the hair cycle and can lead to dramatic shedding over a short space of time; there is no scarring and regrowth usually occurs after a few weeks or months. It classically occurs a few months after high fever, stress, malnutrition, surgery or childbirth.

Tinea capitis (Option D) is incorrect. Tinea capitis may give rise to well-defined areas of alopecia, but the scalp skin in the areas is not normal and complete baldness is not typical: scaling and broken hairs are usually seen; scarring is unusual unless there has been very florid or longstanding inflammation.

Trichotillomania (Option E) is incorrect. Trichotillomania is the self-inflicted pulling out of one's hair; there may be associated underlying psychological morbidity particularly in adult cases. Short, broken hairs are seen, differentiating it from the complete baldness of alopecia areata. Patches of hair loss tend to be unilateral and on the same side as the dominant hand.

Next Question

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Difficulty: Average

Peer Responses

Session Progress

Responses Correct:	0
Responses Incorrect:	111
Responses Total:	111
Responses - % Correct:	0%

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Question 84 of 111

A 22-year-old man presents to the hospital with a pale-pink, papular, non-itching symmetrical rash on his trunk, limbs and palms and soles. He also has white erosions in his mouth. Examination shows generalised lymphadenopathy, and his main symptoms are lassitude, headache, muscle and joint pains. He is a plumber's apprentice and, apart from a 2-week holiday to the Far East 4 months ago, he has never been abroad. What is the most likely diagnosis?

A Infectious mononucleosis

B Pityriasis rosea

C Drug eruption

D Secondary syphilis

E Psoriasis

Explanation

Secondary syphilis

- Secondary syphilis develops 4–12 weeks after the primary infection

Characteristics

- This is characterised by a macular or papular rash, which is symmetrical on the trunk and limbs, as well as the palms and soles
- The rash is pale pink and is non-itching
- Confluent plaques (called 'condylomata lata') may form in the moist flexures
- Small grey or white erosions may be seen on the buccal mucosa
- Patients may complain of muscle and joint pains, headaches and fever
- Generalised lymphadenopathy is common

2499

Next Question

Previous Question Tag Question Feedback End Review

Difficulty: Average

Peer Responses

Session Progress

Responses Correct:	0
Responses Incorrect:	111
Responses Total:	111
Responses - % Correct:	0%

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Question 85 of 111

A homeless male presents with multiple lustreless nails. There is no other skin lesion. He tells you he can't stay long as he has to get back to his dog, which is being looked after by a friend. What is the most appropriate investigation?

A Wood light examination

B Nail clippings for mycology

C C-reactive protein

D Blood cultures

E Erythrocyte sedimentation rate

Explanation

Fungal nail infections

- The diagnosis of fungal nail infection is usually based on clinical grounds

Wood's lamp

- Nevertheless a useful, rapid and easy way to confirm the diagnosis is by using a Wood's lamp
- Yellow to yellow-green fluorescence is characteristic of fine scales taken from active fungal lesions
- However, the sensitivity of this procedure is reduced when patients have taken a recent shower

Other notes

- In this patient, waiting for mycology results is inappropriate as he may well not attend again

5571

Next Question

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Difficulty: Average

Peer Responses

Session Progress

Responses Correct:	0
Responses Incorrect:	111
Responses Total:	111
Responses - % Correct:	0%

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Question 86 of 111

A 23-year-old woman comes to the Dermatology Clinic for review. She has had an ulcerated mole removed from her forearm and has come to the clinic for the results of the histology. Unfortunately histology has revealed an underlying malignant melanoma. The lesion is 1.5mm thick and ulcerated, although it has not spread and excision margins are complete.

Which of the following reflects the likely prognosis with respect to 5 year survival?

A	>80%
B	60-80%
C	40-60%
D	20-40%
E	<20%

Explanation

The answer is >80% -

The histology picture reflects a stage IIa melanoma as defined by:

"The melanoma is between 1 and 2 mm thick and is ulcerated. Or it is between 2 and 4mm and is not ulcerated. The melanoma is only in the skin and there is no sign that it has spread to lymph nodes or other parts of the body."

Survival rates based on the AJCC database are listed below, they are based on 2008 data and are therefore likely to improve over time:

Stage IA: *The 5-year survival rate is around 97%. The 10-year survival is around 95%*
Stage IB: *The 5-year survival rate is around 92%. The 10-year survival is around 86%*
Stage IIA: *The 5-year survival rate is around 81%. The 10-year survival is around 67%*
Stage IIB: *The 5-year survival rate is around 70%. The 10-year survival is around 57%*
Stage IIC: *The 5-year survival rate is around 53%. The 10-year survival is around 40%*
Stage IIIA: *The 5-year survival rate is around 78%. The 10-year survival is around 68%**
Stage IIIB: *The 5-year survival rate is around 59%. The 10-year survival is around 43%*
Stage IIIC: *The 5-year survival rate is around 40%. The 10-year survival is around 24%*
Stage IV: *The 5-year survival rate is about 15% to 20%. The 10-year survival is about 10% to 15%*

http://www.cancer.org/cancer/skincancer-melanoma/detailedguide/melanoma-skin-cancer-survival-rates (http://www.cancer.org/cancer/skincancer-melanoma/detailedguide/melanoma-skin-cancer-survival-rates)

38700

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Difficulty: Average

Peer Responses

Session Progress

Responses Correct:	0
Responses Incorrect:	111
Responses Total:	111
Responses - % Correct:	0%

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Question 87 of 111

A 6-month-old baby is referred with a recurrent itchy eruption affecting his trunk and soles. Examination shows a diffuse eczema on the trunk and pink-red papules on both soles. Which one of the following is the most likely diagnosis?

A Atopic dermatitis

B Pustular psoriasis

C Scabies

D Tinea pedis

E Viral warts

Explanation

Diagnosing scabies

- It is unlikely that the child has pustular psoriasis as there are no pustules in the history
- Tinea pedis and viral warts do not generally give rise to dermatitis on the trunk
- Atopic dermatitis presents with a dermatitis affecting the flexures or the face in babies, without papules on the soles
- Scabies can present with an itchy dermatitic-looking rash on the body, but the clues are at certain sites (soles, genitalia, buttocks)

3146

Next Question

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Difficulty: Difficult

Peer Responses

Session Progress

Responses Correct:	0
Responses Incorrect:	111
Responses Total:	111
Responses - % Correct:	0%

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Question 88 of 111

A 28-year-old French woman presents complaining of increasingly dark areas of pigmentation on her face which have appeared over the past few weeks. She has noticed weight increase over the past few months and has not had a period for 5 months. What is the diagnosis that fits best with this clinical picture?

A	Eczema
B	Lupus
C	Chloasma
D	Vitiligo
E	Prolactinoma

Explanation

Chloasma

- Chloasma is a hormonally stimulated increase in melanogenesis that mainly appears on the face, it affects both pregnant women and those who are taking the combined oral contraceptive pill
- The pigment is augmented by sunlight, hence the more pronounced appearance on the face
- The pigmentation may take many months to resolve after parturition or pill discontinuation
- On testing, levels of melanocyte-stimulating hormone are normal
- It is said that chloasma is more likely to occur in women with darker skin tones
- If women find the condition particularly distressing, they are advised to avoid prolonged sunlight exposure or to use a sunblock

3337

Next Question

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Difficulty: Average

Peer Responses

Session Progress

Responses Correct:	0
Responses Incorrect:	111
Responses Total:	111
Responses - % Correct:	0%

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Question 89 of 111

A 78-year-old man with a history of chronic venous insufficiency presents with a very well-demarcated area of intense erythema on the left leg. There is induration and a raised border.

What organism is most likely to be responsible for this clinical picture?

A Group-A beta-haemolytic *Streptococcus*

B *Haemophilus influenzae*

C *Pseudomonas aeruginosa*

D *Staphylococcus aureus*

E Viridans streptococci

Explanation

The answer is Group-A beta-haemolytic Streptococcus –

- This is the typical picture of erysipelas (also known as St Anthony's fire), a superficial form of cellulitis caused by group-A Streptococcus (S. pyogenes).
- It is characterised by the distinctive warm, red, tender skin lesion with induration and a sharply defined, raised, rapidly advancing border.
- Vesicles or bullae may develop, and desquamation of the area may occur after 7–10 days.
- The face is also commonly affected.
- There is often an associated raised white blood cell count; blood cultures are only positive in 5% of affected patients.
- Culture of aspirated fluid has a low organism yield.
- Treatment of choice is intravenous or oral penicillin, depending on the severity of the lesion.

Haemophilus influenzae (Option B) is incorrect. *H. influenzae* sometimes causes cellulitis in

babies, particularly affecting the head and neck.

Pseudomonas aeruginosa (Option C) is incorrect. *P. aeruginosa* is a common coloniser of ulcers, but rarely causes cellulitis.

Staphylococcus aureus (Option D) is incorrect. *S. aureus* commonly causes skin and soft tissue infection including cellulitis, but the clinical picture described is classical for erysipelas.

Viridans streptococci (Option E) is incorrect. Viridans streptococci include several species of commensal bacteria mostly found in the mouth, although skin colonisation can also occur. They can cause a variety of infections in the context of impaired host defence mechanisms, but not usually cellulitis.

46409

Next Question

Previous Question Tag Question Feedback End Review

Difficulty: Average

Peer Responses

Session Progress

Responses Correct:	0
Responses Incorrect:	111
Responses Total:	111
Responses - % Correct:	0%

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Question 90 of 111

A 19-year-old woman presented in autumn with erythematous macules on the chest and forearm. Routine bloods including FBC, U&E, LFT and ESR are normal.

Which of the following would help with a diagnosis?

A	Antinuclear antibody
B	Porphyria screen
C	Anti-smooth-muscle antibodies
D	Anti-phospholipid antibodies
E	None of the above

Explanation

Pityriasis rosea

- The correct answer is E) None of the above
- The most likely diagnosis is pityriasis rosea, a self-limiting rash seen in adolescents and young adults, and that occurs most commonly in spring and autumn
- It is thought that it may occur as a postviral rash
- The rash consists of circular or oval pink macules with a collarette of scale
- It is more prominent on the trunk but also occurs on the limbs
- It is usually asymptomatic or causes mild itching, and resolves over 4–8 weeks
- No specific treatment is usually indicated for the condition
- The lack of any sigificant other history and normal routine bloods make SLE, porphyria, and primary biliary cirrhosis very unlikely

5188

Next Question

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Difficulty: Average

Peer Responses

Session Progress

Responses Correct:	0
Responses Incorrect:	111
Responses Total:	111
Responses - % Correct:	0%

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Question 91 of 111

A 55-year-old man has a squamous-cell carcinoma of his lower lip. Which one of the following is most likely to be a feature of this type of carcinoma?

A It commonly spreads to distant sites by venous channels

B Five-year survival is poor

C It is unrelated to sun exposure

D It is commonly seen in patients under 45 years of age

E It is capable of metastasising via the lymphatics

Explanation

Squamous-cell carcinoma

Epidemiology and aetiology

- Squamous-cell carcinoma (SCC) of the skin is seldom seen in persons under 45 years of age
- It usually occurs in sun-exposed areas such as the face and lower lips and is currently the second most common type of non-melanoma skin cancer
- Squamous-cell carcinomas may arise from areas of Bowen's disease and sometimes in the margin of a chronic leg ulcer

Metastasis

- It spreads to distant sites by the lymphatic channels
- Foremost among the factors influencing metastatic risk are the size and location of the tumour and, to a lesser extent, a rapid growth rate

Diagnosis and treatment

- Excision biopsy is essential for accurate diagnosis

- Radical surgery and radiotherapy are the treatment of choice, with a 95% cure rate being possible if prompt and complete excision can be carried out
- However, patients who develop one SCC have a 40% risk of developing additional SCCs within the next 2 years and should remain under surveillance

Prognosis

Although prognosis for established metastatic SCC was historically considered extremely poor, recently published data show that the combined use of surgery and adjuvant radiotherapy for patients with nodal metastasis increased the 5-year survival rate to 73%

2500

Next Question

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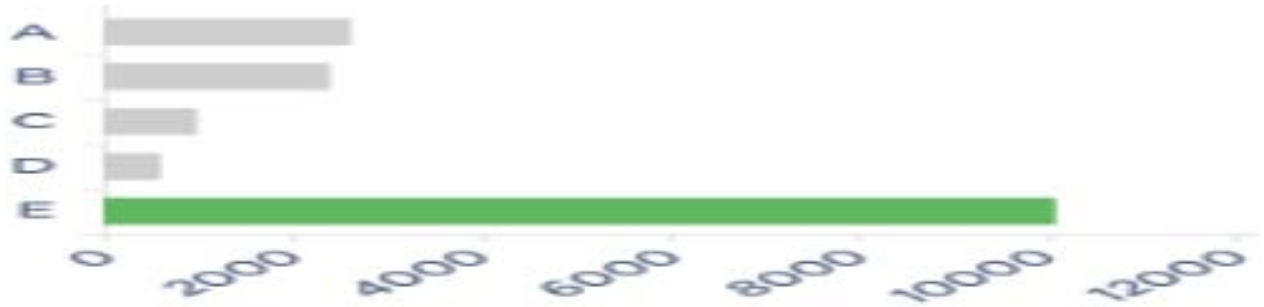
Difficulty: Average

Peer Responses



Session Progress

Responses Correct:	0
Responses Incorrect:	111
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Responses - % Correct:	0%

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Question 92 of 111

What is the cause for tinea incognito?

A Bacterial superinfection

B Fungal superinfection

C Inappropriate treatment with steroid cream

D Inappropriate treatment with antifungal cream

E Food poisoning

Explanation

Tinea incognito

- Tinea incognito is the name given to tinea when the clinical appearance has been altered by inappropriate treatment, usually a topical steroid cream
- Tinea is an infection with a dermatophyte fungus
- The result is that the original infection slowly extends
- Often the patient and/or their doctor believe they have a dermatitis, hence the use of a topical steroid cream
- The steroid cream dampens down inflammation so the condition feels less irritable
- But when the cream is stopped for a few days the itch gets worse, so the steroid cream is promptly used again
- The more steroid applied, the more extensive the fungal infection becomes

5631

Next Question

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Difficulty: Average

Peer Responses

Session Progress

Responses Correct:	0
Responses Incorrect:	111
Responses Total:	111
Responses - % Correct:	0%

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Question 93 of 111

A 42-year-old woman who has been taking phenytoin for the past month for epilepsy comes to the surgery for review. She is complaining of a severe skin reaction. On examination she is pyrexial at 37.9°C, and has a BP of 110/70 mmHg. She tells you that she feels awful. Apparently the rash began on her face and quickly spread over the rest of the body. They begin as large, painful, burning macules, and eventually the epidermis sheds, to reveal a moist dermis layer underneath. Her mucous membranes seem to be affected and she has crusted bleeding around her lips. The table below contains investigation results.

Hb	12.9 g/dl
WCC	9.2×10^9/litre (raised eosinophils)
PLT	203×10^9/litre
Na^+	140 mmol/litre
K^+	5.2 mmol/litre
Creatinine	140 µmol/litre

Which one of the following is the most likely diagnosis?

A Toxic epidermal necrolysis

B Necrotising fasciitis

C SLE

D Pemphigoid

E Pemphigus

Explanation

Toxic epidermal necrolysis

- This patient has a skin picture that fits with toxic epidermal necrolysis (TEN)
- Drug-related cases generally occur within the first 8 weeks of starting the drug

- Skin biopsy is diagnostic for the condition and a key part of the work up
- Eosinophilia is seen on the full blood count, with variable abnormalities in liver function tests/albumin according to the severity of the condition

Management

- Management includes withdrawal of the offending agent, and management of the patient in a specialist plastics/ burns unit
- Use of corticosteroids is controversial and not recommended since some studies appeared to show increased mortality

Causes

- Other agents known to cause TEN include
  - allopurinol
  - aspirin
  - NSAIDs
  - lamotrigine
  - lansoprazole
  - penicillins

22523

Next Question

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Difficulty: Easy

Peer Responses

Session Progress

Responses Correct:	0
Responses Incorrect:	111
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Responses - % Correct:	0%

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Question 94 of 111

A 12-year-old boy, who has recently been circumcised, presents with pruritic purple papules on the scar and on his ankles. These are covered in fine white scale. Oral examination is normal.

What is the most likely diagnosis?

A	Discoid eczema
B	Lichen planus
C	Psoriasis
D	Pyogenic granuloma
E	Scabies

Explanation

The answer is Lichen planus –

- Classical lichen planus is characterised by an itchy, violaceous, polygonal, flat-topped papular rash most commonly developing over the wrists and ankles.
- A pale, lacy network is often – but not always – found in the mouth, although this may be asymptomatic.
- The presence of Wickham's striae – a fine, white lacy pattern over the papules – is characteristic.
- The Koebner phenomenon is typically seen in lichen planus (whereby the rash 'colonises' sites of trauma a few days later).
- It has been associated with liver disease including hepatitis C, primary biliary cirrhosis and chronic active hepatitis, although this is unlikely to be a consideration in this case.
- It usually resolves in 6–18 months.
- Lichen planus often responds to potent or very potent topical steroid, but some patients will require oral prednisolone.

Discoid eczema (Option A) is incorrect. Discoid eczema refers to eczema in small plaques; unlike other forms of eczema, these tend to be well defined; the pattern can be seen as part of atopic eczema and lesions are typically highly pruritic. There is no specific distribution. Lesions commonly become infected, leading to weeping and crusting.

Psoriasis (Option C) is incorrect. Although the Koebner phenomenon is prototypically seen in psoriasis, the condition is characterised by plaques rather than papules; the overlying scaling is typically coarse; itching may be absent, although not always.

Pyogenic granuloma (Option D) is incorrect. Pyogenic granuloma is an abnormal proliferation of capillaries following trauma or infection (it is neither pyogenic, nor granulomatous). It typically presents as a pedunculated, eroded nodule that bleeds easily when traumatised.

Scabies (Option E) is incorrect. Scabies classically causes penile papules and severe pruritus; however, the information in the scenario points towards the Koebner phenomenon and the details given fit better with lichen planus.

46398

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Difficulty: Average

Peer Responses

Session Progress

Responses Correct:	0
Responses Incorrect:	111
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Responses - % Correct:	0%

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Question 95 of 111

You are asked to review a 24-year-old woman who has a history of excessive sunbathing and is worried about her risk of skin cancer. She has been reading about melanin production on the Internet and wants to know about where melanocytes are positioned in the anatomy of the skin. Which of the following best describes the position of melanocytes?

A Melanocytes are positioned in the basal layer of the epidermis

B Melanocytes are positioned in the outer layer of the epidermis

C Melanocytes are positioned in the dermis

D Melanocytes are positioned in the mid-layers of the epidermis

E Melanocytes are positioned in the subdermal layer

Explanation

Melanocytes

- Melanocytes are positioned in the basal layer of the epidermis
- The melanin system is composed of a melanocyte that supplies melanin to a group of keratinocytes to form a so called ‘melanin unit’
- Melanocytes are dendritic cells and have no desmosomes, (intercellular bridges)
- They have a small dark nucleus and clear cytoplasm
- Melanocytes begin in the dermis and migrate during fetal development
- Occasional dermal melanocytes are left at birth, and may appear as mongoloid spots in the sacral area of black or oriental infants

10711

Next Question

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Difficulty: Average

Peer Responses

Session Progress

Responses Correct:	0
Responses Incorrect:	111
Responses Total:	111
Responses - % Correct:	0%

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Question 96 of 111

A 33-year-old woman reports that some of her nails have changed.

Which one of the following is most associated with onycholysis?

A Arsenic poisoning

B Bullous pemphigoid

C Doxycycline

D Mycoplasma pneumonia

E Pityriasis rosea

Explanation

The answer is Doxycycline –

- Onycholysis is separation of the nail plate from the nail bed, generally extending from the free edge of the nail.
- It is relatively commonly seen in psoriatic nail disease.
- Many other causes have been described, including trauma, infection and drugs such as tetracyclines and psoralens.

Arsenic poisoning (Option A) is incorrect. Arsenic poisoning has been associated with Mees' lines (transverse lines across the nail plate) but not onycholysis.

Bullous pemphigoid (Option B) is incorrect. Onycholysis is recognised in pemphigus rather than pemphigoid.

Mycoplasma pneumonia (Option D) is incorrect. There are no reports of onycholysis occurring in association with mycoplasma infection.

Pityriasis rosea (Option E) is incorrect. There are no reports of onycholysis occurring in association with pityriasis rosea, which does not usually cause any nail changes.

46390

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Difficulty: Average

Peer Responses

Session Progress

Responses Correct:	0
Responses Incorrect:	111
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Responses - % Correct:	0%

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Question 97 of 111

A 22-year-old Caucasian woman with a history of type 1 diabetes presents for review. She has just returned from a summer holiday in Spain and has noticed some patches on her body that do not appear to have tanned. Which diagnosis fits best with this clinical picture?

A Pityriasis versicolor

B Morphoea

C Chloasma

D Vitiligo

E Leprosy

Explanation

Vitiligo

- Vitiligo is characterised by acquired areas of skin depigmentation owing to loss of melanocyte function
- There is an association with autoimmune disease such as type 1 diabetes, coeliac disease, autoimmune thyroid disease and Addison's disease
- It is said to affect around 0.4% of the Caucasian population
- Biopsy reveals that epidermal melanocytes are lost from the basal layer of the epidermis
- The condition often becomes obvious to Caucasians during the summer months, as affected areas fail to tan
- Treatment is generally unsatisfactory
- The condition also occurs in darker skinned races
- In areas where leprosy is endemic, this must be considered as part of the differential diagnosis
- Pityriasis affects one area only characteristically
- Chloasma represents increased pigmentation associated with pregnancy

✚ Leprosy is associated with thickening of peripheral nerves

3353

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Difficulty: Average

Peer Responses

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Responses Correct:	0
Responses Incorrect:	111
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Responses - % Correct:	0%

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A 67-year-old heavy smoker presents to his GP for review. He has developed a blue–violet rash on his face, particularly around the eyes. Past history of note includes hypertension, hypothyroidism, for which he is taking thyroxine, and hypercholesterolaemia, for which he takes simvastatin. There is also erythema on the back of his hands and feet, and nailfold haemorrhages are present. On examination there is mild proximal muscle weakness. Which diagnosis fits best with this clinical picture?

A	Hypothyroid proximal myopathy
B	Dermatomyositis
C	Statin-related rhabdomyolysis
D	Cushing's disease
E	Discoid lupus

Explanation

Dermatomyositis

- The typical rash of dermatomyositis is a macular erythema with a blue–violet (heliotrope) coloration around the eyes
- There is also linear erythema over the dorsum of the hands and feet, and nailfold haemorrhages in some patients. In adults there is an association with occult malignancy

Clinical investigations

- Skin biopsy usually reveals liquefaction degeneration of the basal layer, and thin and atrophic overlying epidermis
- The dermis may contain large numbers of free melanin granules
- Muscle biopsy may show fibre degeneration and internalisation of the sarcolemmal nuclei
- Proximal myopathy affecting all four limbs is the commonest pattern of muscle weakness, and may be manifest in problems with performing simple tasks around the

home, eg climbing the stairs or getting up out of a chair

Diagnosis and treatment

- Diagnosis is made on the basis of the typical rash, proximal myopathy and raised circulating muscle enzymes
- Oral prednisolone, with or without the addition of azathioprine for steroid-sparing, is standard therapy

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Peer Responses

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A 23-year-old woman who is 5-months pregnant presents to the GP with concerns about changes in her skin appearance. She reports that she has always had some light brown discolorations on her skin, a lot of freckling and lumps on her skin, but that these have worsened during the pregnancy. On examination she has multiple light-brown pigmented areas on her skin, a number of friable cutaneous skin lesions and axillary freckling. Which one of the following is the most likely diagnosis?

A	MEN-1
B	MEN-2
C	Neurofibromatosis type 1
D	Neurofibromatosis type 2
E	Acanthosis nigricans

Explanation

Neurofibromatosis

- Neurofibromatosis results from a deletion or mutation in the NF-1 gene, the product of which, neurofibromin, acts as a suppressor for CNS tumours
- The disease is associated with less-central CNS tumours than neurofibromatosis type 2, but is associated with a mixture of skin features such as
  - multiple café-au-lait spots
  - axillary freckling
  - cutaneous neurofibromas
- Skin features develop over a number of years, but the pace of development may increase during puberty and pregnancy

20458

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Difficulty: Average

Peer Responses

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Responses Correct:	0
Responses Incorrect:	111
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Question 100 of 111

A 55-year-old woman known to suffer from rheumatoid arthritis has developed necrotic ulcers on her legs. According to her description, these started as papules. She has multiple ulcers on her legs with a sloughy base and raised purplish prominent rim. Which one of the following treatments is recommended in such cases?

A	Prednisolone
B	Bleomycin
C	Intravenous gammaglobulins
D	Local application of silver nitrate
E	Long-term intravenous metronidazole

Explanation

Pyoderma gangrenosum

- This woman has developed pyoderma gangrenosum (PG)
- PG is associated with
  - rheumatoid arthritis
  - multiple myeloma
  - polycythaemia vera
  - inflammatory bowel disease
  - acute leukaemia
- It is characterised by the development of papules and pustules on the trunk or the limbs
- These rapidly enlarge and produce large necrotic ulcers, having a sloughy base and a prominent purplish rim
- Treatment includes
  - prednisolone
  - azathioprine
  - colchicine
  - tetracycline
  - clofazimine

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Question 101 of 111

A 49-year-old man with multiple psoriatic-type plaques presents for review. He has a history of hypertension (for which he takes atenolol), atrial fibrillation (for which he takes warfarin) and epilepsy (for which he takes phenytoin). He has had a recent chest infection and is currently taking a combination of clarithromycin and amoxicillin. Which one of these drugs is most likely to be the cause of his skin problem?

A Warfarin

B Phenytoin

C Clarithromycin

D Amoxicillin

E Atenolol

Explanation

Psoriatic-type reactions to drugs

- Psoriatic-type reactions are most commonly caused by beta-blockers
- Antibiotics may cause lupus-type reactions, erythema multiforme, Stevens–Johnson syndrome and erythroderma
- Warfarin is associated with alopecia, as are cytotoxic agents and antithyroid agents
- Phenytoin may cause both acne and gingival hyperplasia
- Generally, skin reactions are classified according to the type of immunological reaction, namely anaphylactic, cytotoxic, immune-complex mediated and delayed hypersensitivity or cell-mediated skin reactions

Treatment

- Clearly, the key treatment step is withdrawal of the offending agent if possible
- Antihistamines may be useful for relieving itch, while systemic steroids may of value in certain types of skin reaction, eg severe exfoliative dermatitis or Stevens–Johnson

syndrome

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Difficulty: Difficult

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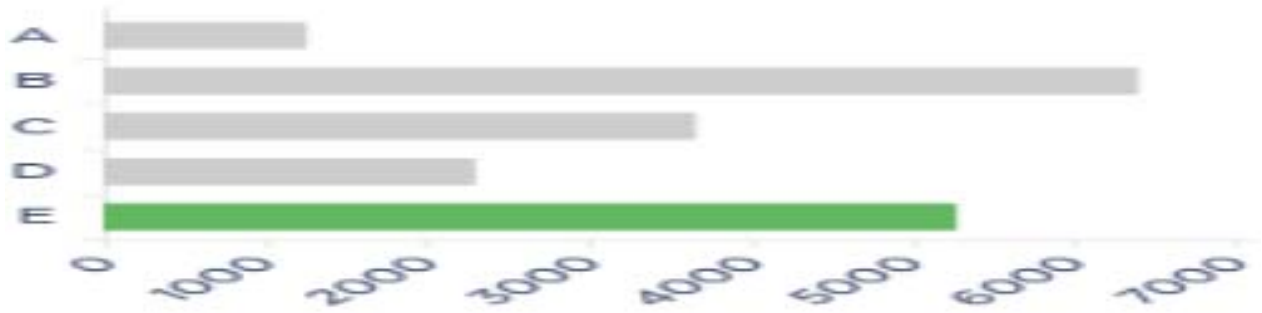

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Responses Correct:	0
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A 45-year-old woman presents with mouth ulceration, and target lesions on the palms and soles.

Which one of the following disorders is most commonly associated with erythema multiforme?

A	Coeliac disease
B	Herpes simplex infection
C	Rheumatoid arthritis
D	Sarcoidosis
E	Tuberculosis infection

Explanation

The answer is Herpes simplex infection –

- Erythema multiforme is a reactive eruption, which is charactised by target lesions (concentric rings with a least three hues per individual lesion); these tend to predominate at acral sites and mucosal involvement is common.
- It is typically associated with infection, most commonly herpes simplex virus; it can also follow mycoplasma infection; it has been associated with a variety of other viral infections including HIV and hepatitis viruses.
- Occasionally, erythema multiforme occurs as a drug eruption: culprit drugs include anticonvulsants, sulfonamides, non-steroidal anti-inflammatory drugs and penicillins.

Coeliac disease (Option A) is incorrect. Coeliac disease is closely associated with dermatitis herpetiformis, but not EM.

Rheumatoid arthritis (Option C) is incorrect. Rheumatoid disease is not associated with EM.

Sarcoidosis (Option D) is incorrect. EM can occur in sarcoidosis, but the association is rare. A diverse spectrum of skin changes can arise in sarcoidosis.

Tuberculosis infection (Option E) is incorrect. EM has been reported occasionally in the context of tuberculosis, but generally linked to its drug treatment rather than the infection itself.

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Question 103 of 111

A 12-year-old girl is admitted to hospital with a history of an epileptic fit. The admitting doctor has documented hypopigmented macules on her abdomen and acne-like eruption on her face. Examination of her fingers shows small periungal fibrous papules. She is also known to have learning disabilities. What is the most likely diagnosis?

A	Tuberous sclerosis
B	Neurofibromatosis
C	Refsum disease
D	Osler’s disease
E	Bloom syndrome

Explanation

Tuberous sclerosis (Bourneville disease)

- Tuberous sclerosis (Bourneville disease) is an autosomal-dominant disorder with variable expression
- Epilepsy in infancy or childhood is often the presenting feature
- Mental deficiency is commonly seen
- Elongated hypopigmented macules (ash-leaf patches) are commonly seen
- Adenoma sebaceum is an acne-like eruption present on the face
- Periungal fibromas arise as pink projections from the nail folds
- The ‘shagreen patch’ is an angiofibromatous raised plaque usually on the lower back
- Fundoscopy may reveal white streaks along the fundal vessels
- Neurofibromatosis is associated with multiple tumours affecting the CNS or the skin, rather than the macules seen here
- Refsum's is a congenital disorder leading to retinitis pigmentosa, peripheral neuropathy and cerebellar ataxia
- Osler's disease is hereditary haemorrhagic telangiectasia
- Bloom's syndrome is associated with a photosensitive rash and increased risk of

multiple cancers

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Difficulty: Easy

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Question 104 of 111

A 35-year-old man is admitted to hospital with mycoplasma pneumonia. As an inpatient he developed a symmetrically distributed erythematous rash, with concentric rings of varying colours on the back of his hands, palms and forearms. He has also developed lesions in his mouth. What is the most likely diagnosis?

A	Lichen planus
B	Erythema nodosum
C	Guttate psoriasis
D	Erythema multiforme
E	Erythrasma

Explanation

Erythema multiforme

- Erythema multiforme (EM) is an acute self-limiting and often recurrent condition affecting the skin and the mucous membranes
- It is due to circulating immune complexes, and usually occurs 7–14 days after the initial insult
- It is associated with
  - herpes simplex
  - mycoplasma pneumonia
  - drugs (sulphonamides, sulphonylureas and barbiturates)
  - orf
  - streptococci
  - connective-tissue disease
  - tuberculosis
  - histoplasmosis

Presentation

- The hallmark of EM is a target lesion with variable mucous membrane involvement

- The lesions may show a central pallor with oedema and bullae formation, evolving into concentric rings of varying colours
- EM is a spectrum from a relatively minor illness and a rash which starts on the hands and feet spreads centrally, to mucosal involvement with erosions (though generally milder than in Stevens–Johnson syndrome) plus typical or raised atypical targets and epidermal detachment involving less than 10% of the body surface
- The lesions are usually located on the extremities (especially hands, palms and forearms) and/or the face

Stevens–Johnson syndrome

- Stevens–Johnson syndrome typically involves severe mucosal erosions plus widespread distribution of flat atypical targets or purpuric macules and epidermal detachment involving less than 10% of the body surface
- The lesions predominantly involve the trunk and the face

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Question 105 of 111

A 54-year-old woman consults her GP because of persistent oral ulceration and the appearance of fragile blisters on the trunk. Examination reveals extensive erosion over the gingivae and a few eroded lesions on the skin. Histology demonstrates an intraepidermal split just above the basal layer, with evidence of acantholysis. Immunofluorescence confirms intercellular IgG deposition.

Which diagnosis fits best with this clinical picture?

A	Bullous pemphigoid
B	Dermatitis herpetiformis
C	Epidermolysis bullosa acquisita
D	Linear IgA disease
E	Pemphigus vulgaris

Explanation

The answer is Pemphigus vulgaris –

- Pemphigus vulgaris is characterised by mucosal involvement with ulceration (virtually universal and the presenting feature in up to 50%), usually with flaccid blisters, on the trunk in particular.
- As the split is superficial, the blister roof is fragile and easily disrupted to leave predominantly erosions.
- The blisters can be extended with gentle lateral pressure (Nikolsky's sign).
- The typical changes on skin biopsy and direct immunofluorescence (on a perilesional skin sample) are as described in the clinical scenario.
- Pemphigus vulgaris is particularly associated with an Ashkenazi Jewish origin and is associated with antibodies against the desmosomal protein, desmoglein 3.
- Treatment usually begins with systemic corticosteroids and high doses may be required; steroid-sparing agents such as azathioprine or mycophenolate mofetil are

often used.

Bullous pemphigoid (Option A) is incorrect. In bullous pemphigoid, the split in the skin occurs at the dermoepidermal junction, leading to a relatively thick blister roof – prominent tense blisters are thus typical rather than erosions; extensive oral ulceration is unusual in pemphigoid; immunofluorescence shows linear IgG and C3 deposition.

Dermatitis herpetiformis (Option B) is incorrect. Dermatitis herpetiformis results in intensely itchy vesicles, especially on extensor surfaces; immunofluorescence shows linear IgA deposition.

Epidermolysis bullosa acquisita (Option C) is incorrect. Most types of epidermolysis bullosa (EB) are congenital; there are acquired forms (EB acquisita), which mostly resemble bullous pemphigoid rather than pemphigus; immunofluorescence similarly reveals linear IgG deposition.

Linear IgA disease (Option D) is incorrect. Linear IgA disease is associated with tense, thick-roofed blisters with immunofluorescence, the same as in dermatitis herpetiformis.

46413

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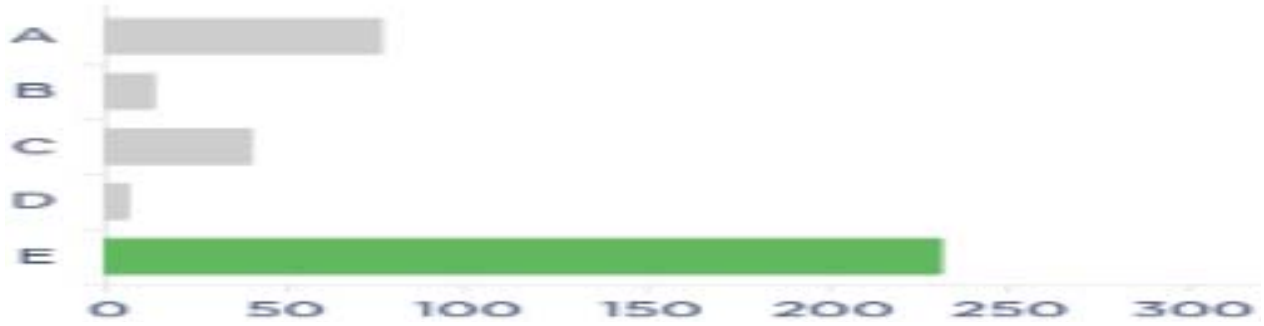
Difficulty: Average

Peer Responses



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A 72-year-old man presents with progressively worsening generalised erythema with severe itching, lethargy and night sweats over the course of the past 7 months. He has also lost 5kg in weight. Past medical history includes diabetes mellitus, a previous inferior myocardial infarction and a left total hip replacement, but nil else of note. On examination his BP is 138/78 mmHg, pulse is 70/min and regular. There is generalised exfoliative dermatitis. A punch skin biopsy confirms extensive invasion by atypical T- cells. His bloods show anaemia with a marked elevation in ESR.

Which of the following is the most likely diagnosis?

A	Cutaneous T cell lymphoma
B	Plaque psoriasis
C	Pemphigus vulgaris
D	Allergic contact dermatitis
E	Lichen planus

Explanation

The answer is Cutaneous T cell lymphoma

The generalised erythema, coupled with this patient's age, symptoms of a significant systemic illness and extensive atypical T-cell invasion on biopsy, fits best with cutaneous T-cell lymphoma. Systemic treatment, such as oral retinoids, recombinant interferon-alpha, fusion toxins, monoclonal antibodies, and single-agent chemotherapy, can be used sequentially to palliate symptoms from more advanced cutaneous T-cell lymphoma as here, where the large size of the area to be treated effectively rules out topical therapies.

Pemphigus is associated with a blistering rash, and the typical skin changes associated with lichen planus are intensely itchy 2-5 mm red or violet shiny flat-topped papules with white streaks known as Wickham's striae.

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Difficulty: Easy

Peer Responses

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A 55-year-old man known to suffer from alcohol-induced liver disease gives a history of a blistering rash on his hands after a holiday in Greece. Examination shows established blisters as well as scar marks. He says he developed a similar rash last year following a holiday in Majorca, which healed with the formation of scars. He also has patches of scarring alopecia. Which one of the following investigations might best establish the diagnosis?

A	Liver biopsy
B	Plasma and urinary uroporphyrins
C	CT scan of the liver
D	Liver function tests
E	Skin biopsy

Explanation

Diagnosing porphyria cutanea tarda

- This patient has porphyria cutanea tarda owing to a deficiency of uroporphyrinogen decarboxylase, which leads to the accumulation of uroporphyrinogen III
- The abnormality can be acquired as a result of alcohol-induced liver disease or it may be inherited
- Exposure to sun results in blister formation, which heal with scarring
- Hypertrichosis may occur, especially over temporal and malar facial areas, and sometimes involves arms and legs
- Scarring alopecia is a feature in more severe cases
- Diagnosis is made by demonstrating the presence of increased plasma and urinary uroporphyrins
- Repeated venesection leads to prolonged clinical and biochemical remission
- Low-dose chloroquine is both safe and effective
- Liver biopsy and/or CT scan of the liver may give more information on status of chronic liver disease but are unlikely to inform on the underlying cause of the skin rash

✚ Skin biopsy is non-specific versus measurement of porphyrins

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Peer Responses

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Question 108 of 111

A 32-year-old man presents with painful mouth sores, a painful red eye and polyarthralgia. Ulcers on a yellow base with erythematous edges are seen in the buccal mucosa. He gives a history of recurrent painful genital ulcers in the past few months which have now healed.

What is the most likely diagnosis?

A	Behçet syndrome
B	Crohn's disease
C	Reactive arthritis
D	Syphilis
E	Systemic lupus erythematosus

Explanation

The answer is option Behçet syndrome –

- Behçet syndrome is a multisystem disorder characterised by recurrent orogenital ulceration, uveitis and arthritis, and is more common in Turkish and Chinese populations.
- It is an autoimmune disease associated with HLA-B12, -B51 and -B5.
- Features may include:
  - Cutaneous: erythema nodosum, acneiform lesions, pathergy (abnormal response to tissue injury, eg skin ulceration following trauma or venepuncture)
  - Gastrointestinal: abdominal pain and diarrhoea
  - Neurological: headache, confusion, aseptic meningitis, coma, cranial nerve palsies, seizures, papilloedema
  - Vascular: large vessel disease can lead to venous thrombosis, and arterial vasculitis and aneurysms.

Diagnosis and treatment

- There is no specific diagnostic test; blood tests tend to be unhelpful as there is no acute-phase response; negative autoantibodies may help to exclude other diagnoses such as SLE.
- Treatment options include oral steroids and azathioprine.

Crohn's disease (Option B) is incorrect. Crohn's disease may present with similar oral aphthous ulceration, but the other features in combination are much more suggestive of Behçet syndrome.

Reactive arthritis (Option C) is incorrect. Reactive arthritis (previously known as Reiter syndrome) usually follows a sexually transmitted infection (especially chlamydia) or gastroenteritis; as well as arthritis, there may be urethritis and conjunctivitis. The recurrent nature of the ulceration and the relative chronicity of symptoms over several months fit better with Behçet syndrome.

Syphilis (Option D) is incorrect. Primary syphilis may present with orogenital ulceration, although classically such lesions are painless. Although there may be associated symptoms in syphilis, the recurrent nature of the ulcers makes this diagnosis less likely.

Systemic lupus erythematosus (SLE) (Option E) is incorrect. Oral ulcers and arthralgia are often seen in SLE, and a variety of ocular complications can occur, including anterior uveitis. However, genital ulceration is very unusual. Although the symptoms described in the scenario demand that SLE be excluded, the features are most in keeping with Behçet syndrome.

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A 68-year-old woman presents with a six-week history of an itchy rash. The rash appeared on the medial and anterior aspects of the thigh and trunk. It consisted of numerous small fluid-filled vesicles, and a number of larger lesions measuring 2-3 cm filled with serous fluid. What is the most likely diagnosis?

A Vesicular insect-bite eruption

B Bullous impetigo

C Bullous pemphigoid

D Scabies

E Dermatitis herpetiformis

Explanation

Bullous pemphigoid

- Bullous pemphigoid is an autoimmune blistering disorder characterised by the presence of autoantibodies to hemidesmosome proteins, which attach the basal keratinocytes to the basement membrane and dermis
- A split occurs between the epidermis and dermis so that blisters are tense and do not spontaneously rupture
- Blisters are usually symmetrical and involve trunk and limbs
- The mouth is involved in 10% of cases

Other notes

Insect bites

- Insect bites are often linear or grouped in distribution and are usually short lived
- Tense blisters may occasionally occur on a background of an urticarial-like wheal at the site of the bites

Impetigo

- Impetigo is a very superficial infection of the stratum corneum caused by *Staphylococcus aureus* or *Streptococcus* spp
- It is commonest in children
- Impetigo is characterised by a golden crusted eruption on a background of erythema
- Occasionally the organism produces a toxin, which binds to superficial keratinocyte adhesion molecules and thus causes an intraepidermal superficial blister
- Bullous impetigo occurs most often in children as a result of rapidly spreading infection

Scabies

- Scabies occurs as itchy excoriated papules on the finger webs, elbows, ankles, axillae and genitalia, and only rarely causes blistering
- Burrows of the scabies mite are seen, and patchy excoriated fissured eczema occurs
- Adult males may develop itchy penile nodules, and infants may develop nodules on the palms or soles
- Norwegian (crusted) scabies causes a hyperkeratotic reaction of the hands and occurs in debilitated, immunosuppressed or institutionalised individuals

Dermatitis herpetiformis

- Dermatitis herpetiformis (DH) is intensely pruritic and typically causes tiny vesicles on the extensor aspects of the elbows, knees and buttocks
- All patients have some degree of gluten intolerance and coeliac disease is common
- Gluten exclusion leads to remission of DH and dapsone may be used to control active disease

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Peer Responses

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A 55-year-old man complains of nausea, loss of appetite and dyspepsia after meals for the last 2 weeks. He is a smoker and has a past history of pernicious anaemia. He is pale, cachexic and tender at the epigastrium. His skin is velvety and hyperpigmented at the neck and axillary folds.

What is the correct diagnosis for his skin condition?

A	Acanthosis nigricans
B	Lentigines
C	Melasma
D	Pyoderma gangrenosum
E	Tylosis

Explanation

The answer is Acanthosis nigricans –

- Acanthosis nigricans is characterised by velvety thickening and pigmentation of the flexures, notably on the neck and axillae, but sometimes elsewhere.
- It is divided into benign and malignant forms depending on the underlying cause; benign is sometimes referred to as pseudoacanthosis nigricans and malignant as true acanthosis nigricans.
- Benign acanthosis nigricans is usually associated with insulin resistance and the metabolic syndrome, such as with type II diabetes, obesity or polycystic ovarian syndrome.
- Malignant acanthosis nigricans is particularly associated with gastric cancer, as is suggested in this scenario.

Lentigines (Option B) is incorrect. Lentigines are types of freckles which are usually sun-

induced.

Melasma (Option C) is incorrect. Melasma (also known as chloasma) gives rise to facial hyperpigmentation; it is exacerbated by sunlight and oestrogens.

Pyoderma gangrenosum (Option D) is incorrect. Pyoderma gangrenosum gives rise to ulcers; it can occur in association with a variety of conditions including inflammatory bowel disease, myeloproliferative disease and rheumatoid disease.

Tylosis (Option E) is incorrect. Tylosis is a type of palmoplantar keratoderma, which can be associated with oesophageal carcinoma.

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A 66-year-old woman presents with a skin disorder that is suspected to be paraneoplastic in origin. She also has weight loss and a persistent cough, for which she is being investigated at the respiratory clinic. Which dermatology presentation is she likely to have?

A	Necrolytic migratory erythema
B	Sweet disease (acute neutrophilic dermatosis)
C	Dermatomyositis
D	Tylosis
E	Ichthyosis

Explanation

Dermatomyositis

- The adult form of dermatomyositis has a peak of onset between 40 and 60 years
- In approximately 50%, it is associated with a malignancy which commonly occurs in
  - the lung
  - breast
  - female genital tract
  - stomach
  - rectum
  - kidney
  - testis
- A lymphoma may be associated

Other notes

- Necrolytic migratory erythema occurs with a glucagonoma
- Sweet syndrome (acute neutrophilic dermatosis) may be seen with acute myelocytic leukaemia and other malignancies
- Tylosis (keratoderma of the palms)is autosomal-dominant, associated with carcinoma

of the oesophagus in some, but not all families

✚ Ichthyosis is associated with lymphoma

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