

**DERMATOLOGY
COLLEGE
OF MEDICINE**



MOC Questions

1) Numerous recent studies have reported a genetic basis for eruptive vellus hair cysts. What is the associated keratin defect?

1. Keratin 6b
2. Keratin 17
3. Keratin 6a
4. Keratin 10
5. Keratin 16

Answer

MOC #1

- **Option 2, keratin 17**
- Eruptive vellous hair cysts are associated with mutation in keratin 17 which is only listed in option 2.
- Steatocystoma multiplex is associated with keratin 10 and 17.

Reference:

Tomkova, H., et al. Expression of keratins (K10 and K17) in steatocystoma multiplex, eruptive vellus hair cysts, and epidermoid and trichilemmal cysts. *Am J Dermatopathol.* 1997. 19(3): p. 250-3.

2) A 58 year old female presents with a facial dermatitis of erythematous malar plaques with overlying crust as well as bullae on the upper chest. ANA is positive in low titers. Which of the following best describes the direct immunofluorescence and histological findings in a patient with pemphigus erythematosus?

1. DIF findings of intercellular immune deposition and histology findings of basal vacuolar change without acantholysis.
2. DIF findings of immunoglobulin and complement deposition at the DEJ as well as intercellularly and histology finding of acantholysis.
3. DIF findings of linear immunoglobulin deposition at the DEJ without intercellular deposition and histology lacking acantholysis.
4. DIF findings of complement deposition intercellularly and histology findings of acantholysis and vacuolar basal layer changes.
5. DIF findings of granular deposition along the DEJ and histology findings that are non-specific.

Answer

MOC #2

- **Option 2: DIF findings of immunoglobulin and complement deposition at the DEJ as well as intercellularly and histology finding of acantholysis.**
- This is the only option that summarizes the key DIF and histological findings of PE.
- PE on H&E shows acantholysis consistent with pemphigus foliaceus without the changes of lupus.
- On DIF, PE has deposition both intercellularly (as in pemphigus foliaceus) and at the DEJ (as in lupus).

Reference:

Chorzelski T, et al. Immunopathological investigations in the Senear Usher syndrome (coexistence of pemphigus and lupus erythematosus). *Br J Dermatol.* 1967; 80(4):211-217.

3) A 32 year old male known cocaine user presents with multiple necrotic stellate plaques on the legs and bilateral helices. You suspect levamisole-induced vasculopathy. Which of the following markers commonly used in testing for autoimmune diseases may be positive in a patient with levamisole-induced vasculopathy?

1. Anti-CCP
2. Anti-SSA
3. Anti-Mi-2
4. Antiphospholipid antibody
5. Rheumatoid factor

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CI2

changed from vasculitis to vasculopathy

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Answer

MOC #3

- **Option 4: Antiphospholipid antibody**
- Antibodies reported to be positive in levamisole-induced vasculopathy include the following: antiphospholipid antibody, anti-MPO, anti-PR3, ANA, anticardiolipin antibody, anti-ribonucleoprotein antibody, and anti-dsDNA.

References:

1. Ching, J.A. and D.J. Smith, Jr., Levamisole-induced necrosis of skin, soft tissue, and bone: case report and review of literature. *J Burn Care Res.* 2012. **33**(1): p. e1-5.
2. Graf, J., Rheumatic manifestations of cocaine use. *Curr Opin Rheumatol.* 2013. **25**(1): p. 50-5.
3. Buchanan, J.A. and E.J. Lavonas, Agranulocytosis and other consequences due to use of illicit cocaine contaminated with levamisole. *Curr Opin Hematol.* 2012. **19**(1): p. 27-31.
4. Pearson, T., et al., Vasculopathy related to cocaine adulterated with levamisole: A review of the literature. *Dermatol Online J.* 2012. **18**(7): p. 1.

4) Which of the following is a clinical association with Pallister-Killian syndrome?

1. Lung hypoplasia due to congenital diaphragmatic hernia
2. Hypertrichosis with extension of the anterior hairline on to the forehead
3. Stepwise progression of skin lesions including vesicular, verrucous, hyper and hypopigmented stages
4. Neurologic manifestations including Arnold-Chiari malformation
5. Poor intrauterine growth

Answer

MOC #4

- **Option 1: Lung hypoplasia due to congenital diaphragmatic hernia**
- Option 1 is correct because it is the only option that is associated with PKS.
- Option 2 is incorrect because PKS patients show decreased hair density. Option 3 is actually a description of incontinentia pigmenti, not PKS. Option 4 is incorrect because though neurologic manifestations include seizures, no known malformations are **CI3** associated. Option 5 is incorrect because intrauterine growth is actually accelerated in PKS.

Reference:

Izumi K and Krantz ID. Pallister–Killian syndrome. *Am J Med Genet Part C Semin Med Genet*. 2014; 166C:406–413

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CI3

changed wording

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5) The bacteria most often implicated in blastomycosis-like pyoderma is which of the following?

1. Enterobacteriaceae sp.
2. *Pseudomonas aeruginosa*
3. β -hemolytic streptococcus
4. *Staphylococcus aureus*
5. *Actinosporangium violaceum*

Answer

MOC #5

- **Option 4: *Staphylococcus aureus***
- Though many etiologies have been described in the literature, *S. Aureus* is the most commonly reported cause.

Reference:

Guidry JA, et al. Deep Fungal Infections, Blastomycosis-Like Pyoderma, and Granulomatous Sexually Transmitted Infections. *Dermatol Clin.* 2015; 33(3):595-607.

6) A 63 year old male presents with hyperpigmented patches on his back and hypoesthesia of the extremities for three years duration. The patient has a history of living in close proximity to armadillos. Skin biopsy shows positive Fite stain consistent with tuberculoid leprosy while nerve biopsy shows positive Fite stains consistent with lepromatous leprosy. At this time, what is the recommended treatment?

1. Minocycline 100 mg daily and dapsone 100 mg daily for 12 months
2. Dapsone 100 mg daily, rifampin 600 mg monthly for 12 months
3. Minocycline 100 mg daily and clofazamine 50 mg daily for 24 months
4. Dapsone 100 mg daily, rifampin 600 mg monthly, and clofazamine 50 mg daily for 24 months
5. Dapsone monotherapy

Answer

MOC #6

- **Option 4: Dapsone 100 mg daily, rifampin 600 mg monthly, and clofazamine 50 mg daily for 24 months.**
- This is the National Hansen's Disease Clinic recommendations for treatment of multibacillary leprosy disease.
- The patient presents with tuberculoid leprosy on the skin, and lepromatous leprosy in the nerves. The treatment should be geared towards the more severe form of leprosy diagnosed.
- Since the patient's nerve biopsy is consistent with lepromatous leprosy, treating multibacillary disease with triple medication therapy including dapsone, rifampin and clofazamine is the correct choice.

Reference:

Hansen's Disease- Recommended Treatment Regimens. U.S. Department of Health and Human Services, accessed on 20 Aug. 2016. [Www. HRSA.gov/Hansensdisease/diagnosis/recommendedtreatment.html](http://www.HRSA.gov/Hansensdisease/diagnosis/recommendedtreatment.html).

7) A 62 year old female body builder presents with an ulcerated, indurated plaque on her left arm. She is a breast cancer survivor. The lesion is biopsied and confirmed to be an angiosarcoma. Which of the following is NOT^{CI7} a risk factor for her condition?

1. Vinyl chloride exposure
2. Prior radiotherapy
3. Sun exposure
4. Anabolic steroid use
5. Chronic lymphedema

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CI7

Not sure, but I think the MOC questions cannot be in the form of a "NOT" question. Could definitely be wrong about this, and not sure that it even matters much.

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Answer

MOC #7

- **Option 3: Sun exposure**
- All of the listed answer choices are known risk factors for epithelioid angiosarcoma except sun exposure.

References:

1. Young RJ, et al. Angiosarcoma. *Lancet Oncol.* 2010; 11:983-91
2. Marchal C, et al. Nine breast angiosarcomas after conservative treatment for breast carcinoma: a survey from French comprehensive Cancer Centers. *In J Radiat Oncol Biol Phys.* 1999; 44:113-19

8) A 39 year old female presents with a single non-tender cutaneous nodule on the left neck for two years. A skin biopsy was performed, revealing a proliferation of vascular channels lined by large epithelioid endothelial cells in the superficial and deep dermis with surrounding inflammatory infiltrate composed mainly of lymphocytes and eosinophils. What is the most likely diagnosis?

1. Cutaneous epithelioid angiomatous nodules
2. Epithelioid hemangioma
3. Bacillary angiomatosis
4. Pyogenic granuloma
5. Kaposi sarcoma

Answer

MOC #8

- **Option 2: Epithelioid hemangioma**
- A proliferation of vascular channels lined by large epithelioid endothelial cells in the superficial and deep dermis with surrounding inflammatory infiltrate composed mainly of lymphocytes and eosinophils best fits the description of a epithelioid hemangioma.

Reference:

Al-Daraji W I et al. Cutaneous Epithelioid Angiomatous Nodule: Different views or interpretations in the analysis of ten new cases. *Derm Online J.* 2009; 15(3):2.