Welcome to the FIT Board Review Corner, prepared by Miriam Samstein, MD, PhD, and Timothy Chow, MD senior and junior representatives of the College’s Fellows-In-Training (FITs) to the Board of Regents. The FIT Board Review Corner is an opportunity to help hone your Board preparedness.

**Review Questions**

**Allergy and Immunology Review Corner:** Middleton’s Allergy Principles and Practice, 8th Edition
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**Chapter 35: Contact Dermatitis**
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1. The weighted average prevalence of contact allergy to at least one contact allergen (based on data collected on all age groups and in all reporting countries between 1966-2007) is:
   a. 15.9%
   b. 19.5%
   c. 35.9%
   d. 41.5%

2. Fill in the blank: “Contact dermatitis occurred ______ as frequently in women as in men, and often started at a(n) ________ age, with a prevalence of 15% in ___________ year-olds.”
   a. Half, young, 12-16
   b. Half, older, 30-35
   c. Twice, young, 12-16
   d. Twice, older, 30-35

3. Acute contact dermatitis caused by chromium (VI) (CrVI) has long been a recognized occupational problem, especially from exposure to:
   a. Hair dyes
   b. Baking yeast
   c. Mobile phones
   d. Wet cement

4. Irritant contact dermatitis is the most common form of contact dermatitis in the population. An irritant will cause direct injury to the skin in any person, if applied in a sufficient concentration for a sufficient amount of time, without prior sensitization or immunological memory. Irritants include wet work. “Wet work” is defined when individuals have their skin exposed to liquids longer than:
   a. 1 hrs/day, or use occlusive gloves longer than 1 hrs/day, or clean the hands very often (eg 10 times/day or less if cleaning procedure is aggressive)
   b. 2 hrs/day, or use occlusive gloves longer than 2 hrs/day, or clean the hands very often (eg 20 times/day or less if cleaning procedure is aggressive)
   c. 3 hrs/day, or use occlusive gloves longer than 3 hrs/day, or clean the hands very often (eg 30 times/day or less if cleaning procedure is aggressive)
d. 4 hrs/day, or use occlusive gloves longer than 4 hrs/day, or clean the hands very often (eg 40 times/day or less if cleaning procedure is aggressive)

5. Topical agents causing phototoxic reactions particularly include plants containing furocoumarins, such as:
   a. Celery, carrot, and citrus fruits
   b. Avocado, blueberries, strawberries
   c. Spinach, red cabbage, brussels sprouts
   d. Zucchini, cucumbers, squash

6. Which syndrome - a form of systemic contact dermatitis - can occur when sensitized persons are exposed to allergens from routes other than skin exposure, such as orally, intravenously, or by inhalation?
   a. Lemur syndrome
   b. Rhinoceros syndrome
   c. Hippopotamus syndrome
   d. Baboon syndrome

7. Which pairing of allergen and common source of exposure is Incorrect?
   a. Thiuram mix – rubber accelerator
   b. Carba mix – metal items, coins
   c. p-Phenylenediamine – permanent hair dye
   d. Quaternium 15 – preservative

8. Unlike in irritant contact dermatitis, the borders of the lesions in allergic contact dermatitis are ________ defined. In ACD, additional lesions ________ appear on other parts of the body that have not come into contact with the allergen.
   a. Well; can
   b. Well; can’t
   c. Poorly; can
   d. Poorly; can’t

9. What has been proven effective in treating chronic contact dermatitis, particularly that affecting the hands?
   a. Mycophenolate Mofetil
   b. Azathioprine
   c. Laser therapy
   d. Phototherapy

10. In irritant contact dermatitis of the hands, the predominant areas involved include:
    a. the web spaces initially, the dorsal aspects of the hands and fingers
    b. the palmar areas of the hands initially
    c. the wrist areas
    d. the fingernails initially, then the knuckles of the fingers
Answers:

1. **b**, pg. 566 – The weighted average prevalence of contact allergy to at least one contact allergen is 19.5%.

2. **c**, pg. 566 – Contact dermatitis occurred twice as frequently in women as in men, and often started at a young age, with a prevalence of 15% in 12-16-year-olds.

3. **d**, pg. 566 – During the construction of the Channel tunnel connecting continental Europe with Britain, the prevalence of chromate allergy in cement workers was reported to be as high as 17%. Subsequently, the EU regulated the content of chromium in cement, and sensitization to chromate in construction works has since declined. No such legislation exists in the United States. Other sources of chromate exposure include contact with leather tanned with salts containing chromate and this has become increasingly recognized.

4. **b**, pg. 567 - According to the German regulation of hazardous substances at the workplace, “wet work” is defined when individuals have their skin exposed to liquids longer than 2 hrs/day, or use occlusive gloves longer than 2 hrs/day, or clean the hands very often (e.g., 20 times/day or less if cleaning procedure is aggressive).

5. **a**, pg. 567 - Topical agents causing phototoxic reactions particularly include plants containing furocoumarins, such as celery, carrot, and citrus fruits.

6. **d**, pg. 568 – Systemic contact dermatitis may occur when sensitized persons are exposed to allergens from routes other than skin exposure, such as orally, intravenously, or by inhalation. Clinical manifestations may include flare-ups of dermatitis in previous sites or of positive patch test site reactions, as well as vesicular hand eczema and “baboon syndrome,” which refers to a well-demarcated rash on the buttocks, genital area, and thighs. Causes commonly include metals such as nickel, cobalt, chromate, gold, and mercury. In certain cases, treatment includes dietary avoidance of the particular metal.

7. **b**, pg. 567 – Carba mix - the common source of exposure is rubber accelerators (p. 567 has a nice table).

8. **c**, pg. 568 - Unlike in irritant contact dermatitis, the borders of the lesions in allergic contact dermatitis are poorly defined. In ACD, additional lesions can appear on other parts of the body that have not come into contact with the allergen (a phenomenon known as secondary spread).

9. **d**, pg. 572 – In chronic contact dermatitis, particularly affecting the hands, phototherapy has proved effective. Currently, therapy mainly consists of either UVB light or psoralens plus UVA light (PUVA) applied topically or in a bath. With long-term therapy, the potential carcinogenic risk must be considered.

10. **a**, pg. 568 – It often is not possible to distinguish the clinical findings in ICD from those in ACD. Classically, the first signs of ICD are dry and slightly scaly skin, with increasing redness and lichenification after prolonged or repeated exposure to an irritant(s). This may be followed by formation of fissures, also known as rhagades. Itching is generally not as severe as in ACD. On the hands, the predominant areas involved include the web spaces initially, the dorsal aspects of the
hands and fingers, as well as exposed portions of the forearms. Over the course of disease, the palms may also be involved. The eczematous lesions generally remain limited to exposure sites, and secondary spread to other areas typically does not occur. This feature often is useful to differentiate ICD from ACD.