Diagnostic Approach for Suspected Allergic Cutaneous Reaction to a Permanent Tattoo

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CME Items

1. In the case of an early cutaneous reaction to a permanent tattoo, which of the following entities is more likely?
   a. Bacterial infection.
   b. Allergic reaction.
   c. Skin cancer.
   d. Foreign body reaction.
   e. Sarcoidosis

2. Which of the following diseases should be included in the differential diagnosis of an allergic reaction to a tattoo?
   a. Psoriasis.
   b. Sarcoidosis.
   c. Mycobacterial infection.
   d. Lichen planus.
   e. All the previous answers are correct.

3. Which tattoo ink color produces the greatest number of skin reactions?
   a. Black.
   b. Yellow.
   c. Red.
   d. Blue.
   e. Green.

4. Which of these clinical patterns is least associated with allergic reaction to a tattoo?
   a. Ulceronecrotic.
   b. Plaque-like.
   c. Hyperkeratotic.
   d. Lichenoid.
   e. Neurosensory.

5. Which of the following clinical features is not characteristic of an allergic reaction to permanent tattoo ink?
   a. Persistent reaction.
   b. Distant reaction in previous tattoos of the same color.
   c. Homogeneous infiltration of all the areas tattooed with ink of the same color.
   d. Early reaction.
   e. Poor response to topical corticosteroids.

6. Which of the following histological patterns is most frequently associated with an allergic reaction to a permanent tattoo?
   a. Spongiotic dermatitis.
   b. Lichenoid dermatitis.
   c. Pseudolymphoma B.
   d. Sarcoid granulomatous pattern.
   e. Foreign body granulomatous pattern.

7. Faced with a late skin reaction to a tattoo, under what circumstances is it indicated to perform a skin biopsy?
   a. Poor response to topical corticosteroids.
   b. Always.
   c. Papulonodular clinical pattern.
   d. Immunosuppressed patients.
   e. Red ink tattoos.

8. Which of the following is false with respect to the composition of tattoo ink?
   a. The Spanish Agency of Medicines and Medical Devices approves tattoo inks for commercial use and mandates the labelling of their ingredients.
   b. Clinicians can and should request the safety sheets and batch numbers for the products used by the tattooist.
   c. Inks may contain pigments from inorganic metal salts.
   d. Inks may contain azo pigments.
   e. Azo pigments, which used to be very common, are giving way to metal salts. These may now be present in up to 60% of color inks.

9. Patch testing with metal salts, dispersed pigments, and ink itself usually yields negative results in the study of an allergic reaction to a permanent tattoo. Which of the following explanations were formulated as a hypothesis?
   a. Scant penetration of the test ink into the skin.
   b. The real allergen is not present in its native form in the ink itself, but rather generated in the dermis from pigments or other ink components.
   c. The culprit allergen could be a metabolite.
   d. Sunlight could induce a process of photochemical excision in the tattoo pigments that would allow chemical substances to act as haptens (photoallergic phenomenon).
   e. All the previous answers are correct.

10. Regarding the diagnostic procedure for a skin reaction to a permanent tattoo, which of the following answers is false?
   a. A biopsy should be performed in the case of an early reaction that does not respond to topical corticosteroids.
   b. Deep fungal infection should be ruled out in the case of a late reaction where the skin biopsy specimen reveals an interface pattern.
   c. Patch tests should be considered in the event of a late reaction where the skin biopsy reveals interface dermatitis.
   d. A microbial culture must be taken in the case of an early reaction with exudative-crusted or pustular lesions.
   e. A chest x-ray should be requested in the case of a patient with a late reaction to a tattoo and a sarcoid granulomatous pattern in the biopsy specimen.