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.
 - 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.