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Angioedema-like Hair Dye Reaction

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64-year-old healthy woman presented to the Dermatology Private Clinic with a pruritic facial erythema and swelling of one-day duration, along with intense itching of the scalp. Two days prior, she had applied black dye to her grey hair. During the clinical examination, there was a prominent red swelling was observed on the face, particularly around the eyelids, which prevented her from opening them. The puffiness that was spreading to the cheeks but didn't affect the lips. No dyspnea, wheezing, or stridor was noticed, and her vital signs were normal. Additionally, small blisters were observed on both sides of the nose (Panel A). Upon removing the Islamic hijab, the scalp examination revealed black-dyed hair and slight edema involving the forehead and scalp (Panel B). A diagnosis of severe acute allergic contact dermatitis was made, which is a type IV hypersensitivity reaction caused by exposure to paraphenylenediamine, an extremely potent allergen found in hair dye, a common cosmetic agent. The skin dye reaction could be dermatitis-like symptoms, lichenoid rash, or photo-dermatoses. The patient was treated with mometasone lotion applied twice daily to the scalp, along with an oral non-sedative antihistamine. After five days, the facial erythema and swelling had significantly improved. This case highlights the often-unrecognized risk of acute and severe allergic reactions to black hair dye.

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