

Contact anaphylaxis due to hair dye

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Key words: contact anaphylaxis; para-phenylenediamine (PPD); hair dye; cosmetics; positive prick test; immediate-type hypersensitivity; contact urticaria. © Munksgaard, 2000.

Case Report

A non-atopic 50-year-old clerk developed swelling of both eyelids 8 h after using Godrej hair dye. Subsequently, the whole face and both lips became swollen. He also developed itchy, exudative lesions on the scalp almost simultaneously. The patient had used another brand of hair dye (Black Rose) for 2 years, though infrequently, but had never experienced similar episodes. There was no history of atopy in the family. On examination, there was extensive periorbital and facial oedema, and multiple eczematous lesions on the scalp. He was unable to open his eyes. No respiratory distress was evident. He was treated with a reducing dose of oral corticosteroid and antihistamines, with clearance within 5 days.

Patch tests with hair dye and the Indian standard series and cosmetics and fragrance series (CODFI), showed sensitivity to Godrej hair dye (10% aq.) (+++), PPD (+++) and nickel sulfate (++). Prick testing revealed sensitivity to Godrej hair dye (10% aq.), with a wheal of 6 mm at 5 min and 10 mm at 20 min, Black Rose hair dye (10% aq.) showing a wheal of only 2 mm at 20 min.

Comment

The most common allergic reaction to PPD-containing hair dyes is contact dermatitis. However, immediate hypersensitivity reactions, including asthma, contact urticaria and anaphylaxis, have also more rarely been described (1–3). This, to our knowledge, is the 1st such report from India.

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Immediate, anaphylactic and delayed reactions to jellyfish

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Key words: jellyfish; coelenterates; Portuguese man-of-war; *Physalia physalis*; contact urticaria; anaphylaxis; allergic contact dermatitis; emergency medicine. © Munksgaard, 2000.

Case Report

A 16-year-old male surfer was seen as an emergency 30 min after an encounter with a colony of Portuguese man-of-war while surfing off the coast of South Florida. He presented with dozens of 20–30 cm long urticarial streaks on the arms, chest, and face. Within 10 min, he exhibited anxiety, angioedema, coryza, dyspnea, lacrimation, and a sensation of chest constriction. He was immediately given i.v. volume expanders, epinephrine, soluble methylprednisone, diphenhydramine, and metaprotrenol by inhalation, to reduce bronchospasm. Within 1 h, all symptoms abated, and 1 h later, the patient was discharged from the emergency room. 1 week after this

incident, he developed an acute, pruritic vesicular eruption which followed the course of the original urticarial streaks. This was treated with a potent topical corticosteroid and cleared after several days.

Discussion

Jellyfish are coelenterates and some species such as the Portuguese man-of-war (*Physalia physalis*) can cause serious systemic reactions in susceptible individuals. The fluid contained in the nematocysts, which are the stinging cells, contains neurotoxins phospholipase A and B, as well as other biologically-active peptides (1, 2).

The simultaneous occurrence of immediate and delay-

ed hypersensitivity is unusual but is being reported with increasing frequency (3, 4). Our patient exhibited typical Type I and Type IV immunologic mechanisms which encompassed contact urticaria, anaphylaxis, and allergic contact dermatitis. Those physicians working near to the coast should be aware of the immunology of jellyfish envenomations, and on the alert for immediate, anaphylactic, and delayed hypersensitivity reactions which may require emergency treatment.

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Occupational UVA-induced allergic photodermatitis in a welder due to hydrochlorothiazide and ramipril

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Key words: photodermatitis; allergic; occupational; UV-induced; welder; ramipril; hydrochlorothiazide; medicaments; adverse drug reactions. © Munksgaard, 2000.

Thiazides commonly cause cutaneous allergic drug reactions, including photosensitivity eruptions (1), and angiotensin-converting enzyme (ACE) inhibitors, of both thiol and non-thiol classes, cause lichen planus- or psoriasis-like drug eruptions or pemphigus/pemphigoid (2, 3). Cutaneous photosensitivity to ACE inhibitors, particularly to the non-thiol ramipril, is less well-known.

Materials heated to more than 2500°C usually emit significant amounts of UV-radiation. Welding arcs often reach temperatures of more than 6000°K (4). Thus, welding is one of the most important occupational sources of UV-radiation. Despite this, very little has so far been reported on the direct or indirect effects of welding on the skin.

Case Report

In July 1997, a 63-year-old welder presented with a 6-year history of edema, erythema, and eczema, along with burning sensations and slowly increasing heat-sensitivity, confined to the face, neck, and, intermittently, extensor forearms. This had started abruptly in spring 1991 with burning and erythema of the face after welding. Within the next few months, especially during summer 1991, the patient had increasing aggravation of skin lesions, initially with edema, erythema, and heat sensitivity, and later with eczema confined to the face, neck, and extensor forearms. He reported worsening of symptoms on exposure to sunlight, but also during welding, with intense burning sensations, even though he used welding goggles or a welding shield to cover the face and/or eyes. In August 1991, diagnosis of contact dermatitis and treatment with topical corticosteroids had resulted in intermittent improvement. On patch testing, he was allergic to fragrance mix and a washing paste. He subsequently avoided applications containing these allergens. Due to his symptomatic heat sensitivity, he also avoided long exposures to sunlight and started using a sunscreen.

Despite these efforts, the patient repeatedly had rapid onset of symptoms on welding and remission of such symptoms when off work. Unlike his working colleagues, he reported acute exacerbation of erythema and edema, along with burning sensations, with a 1-day exposure to welding, following a 3-week sick leave with complete clearance of skin lesions in January 1992. The following year, he avoided welding at work and changed his job in June 1993. From that time, his skin condition remained stable with mild eczema and, due to continuing precautions, only slight aggravation in summer.

On presentation in July 1997, the patient showed mild eczema of the face and neck, with submental sparing. He reported drug therapy for essential hypertension, starting in autumn 1990 with a combination of hydrochlorothiazide and ramipril, and from 1992, with ramipril alone. Photopatch tests showed strongly positive reactions to hydrochlorothiazide as well as to ramipril 2 and 3 days after irradiation with 10 J/cm² UVA (320–400 nm). Unirradiated patch tests or patch tests irradiated with UVB or visible light remained negative. Patch tests revealed no reactions to working materials.

Avoidance of ramipril by substitution with another class of antihypertensive agent, use of sunscreens containing a potent UVA-photoabsorber, and treatment with topical corticosteroids resulted in gradual improvement of skin lesions over some weeks. On follow-up over the next few months, his skin lesions cleared completely.

Discussion

Radiation emittance by welding arcs comprises a broad range of wavelengths, i.e., infrared, visible, and ultraviolet light, including the complete spectrum of UVA (4). UV-radiation can occur at exposure levels exceeding those within recommended limits not only in unprotected non-welding individuals near welding stations, but also in welders themselves even if welding helmets are used (5–7). In practice, helmets are often abandoned in