

CONTACT POINTS

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Occupational contact dermatitis with rhinoconjunctivitis due to *Tilia cordata* and colophonium exposure in a cosmetician

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Key words: allergic contact dermatitis; colophonium; cosmetician; occupational; rhinoconjunctivitis; *Tilia cordata*.

Case Report

A 55-year-old non-smoking woman had been working as a cosmetician since 1968. She prepared depilatory wax and herbal beauty masks for clients' faces. She had experienced recurrent itching and erythematous papulovesicular lesions on the backs of the hands for around 18 months, and had a history of sneezing, nasal obstruction and watery eyes since 1997 when in contact with depilatory wax or flowers of *Tilia cordata* (linden) and *Matricaria chamomilla* (German chamomile). The patient reported only work-related symptoms.

Clinical examination, as well as routine laboratory parameters, remained normal. Total immunoglobulin E (IgE) was 13 084 IU/ml (Unicap, Pharmacia, Uppsala, Sweden) and prick tests (Allergopharma, Reinbek, Germany) were positive to common environmental allergens—grass and tree pollens, and to flowers of *T. cordata* and *M. chamomilla* (prick-by-prick). Specific IgE antibodies for grass and tree pollens (Allergopharma, Reinbek, Germany) were negative.

Patch tests with a standard series and a series of plant allergens (Chemotechnique Diagnostics, Malmö, Sweden) were positive to: colophonium 20% pet. (+++), flowers of linden, balsam of Peru (Myroxylon pereirae resin) 25% pet. (+++), thimerosal 0.1% pet. (+++), 4-phenylenediamine 1% pet. (+++) and fragrance mix 8% pet. (+). Patch tests put directly on the patient's back were positive to the flower of linden (+++), but negative to *M. chamomilla*.

A bronchial challenge test was performed in an inhalation chamber for 30 min. In the first stage the patient was challenged with placebo (potato flour); during the second stage (after 7 days) she was mixing depilatory wax that had been thermally activated (90 °C), and after 14 days she was mixing dried flowers (workplace-like conditions). Following such exposures, clinical symptoms of rhinoconjunctivitis appeared, and these were observed up until 48 h after the challenges. Additionally, increases in either eosinophil or basophil proportions in nasal lavages and tear fluids were observed during the late phase of allergic reaction (1, 2).

Comment

A diagnosis of occupational allergy was made based on the positive results of allergic tests, analysis of the clinical state, medical history and positive result of specific challenges. There are several reports of sensitization to colophonium in the electronics industry (3, 4), but contact dermatitis due to colophonium emitted from depilatory wax is less often reported.

Sniffing or handling of linden (*T. cordata*) and German chamomile (*M. chamomilla*) may cause skin and respiratory symptoms (5, 6), though allergic IgE-mediated diseases are seldom observed among occupationally exposed subjects.

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Allergic contact dermatitis due to methyl salicylate in a compress

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Key words: allergic contact dermatitis; compress, medicaments; methyl salicylate.

A 79-year-old woman had a rectangular pruritic erythematous macule on the hip following the use of a Teipap A Cool[®] compress (Teikoku Seiyaku Co. Ltd, Kagawa, Japan). The manufacturer provided samples of the methyl salicylate and other ingredients that are used to manufacture this compress. Patch testing showed a positive reaction to methyl salicylate 2% o.o. on D2 (+) and D3 (+).

Methyl salicylate is an anti-inflammatory agent that can be found in a wide range of over-the-counter liniments, ointments, lotions and medical oils for muscle pains (1). In Japan, methyl salicylate is commonly used as an anti-inflammatory agent in many types of compresses. Topical medicaments containing methyl salicylate may cause not only allergic contact dermatitis (2) but also salicylism (1, 3).

Until now, only a single case of allergic contact dermatitis due to methyl salicylate has been reported (2). Hindson described a case of allergic contact dermatitis caused by the topical use of analgesic ointment containing methyl salicylate. The eruption flared up when the patient took oral aspirin (acetyl salicylic acid) (2).

The present case is the second case of allergic contact dermatitis from methyl salicylate. The occlusive conditions of the compress may have promoted the absorption of methyl salicylate by the skin. This may indicate that occlusive treatment with methyl salicylate is more likely to induce allergic sensitization than is the simple application of ointment or lotion.

In Japan, compresses are a popular home treatment for muscle pains, and dermatitis caused by the use of these compresses is the most common complication. Deeper investigation may show that allergies to methyl salicylate are not as rare as they were once thought to be.

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salicylate. *Hum Exp Toxicol* 1996; 15: 747–750.

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Occupational nail fragility in a professional violist

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Key words: musicians; nail fragility; occupational nail disorders; viola player.

The repetitive movement made by musicians when playing their instru-

ments may cause a variety of skin problems, ranging from callosities to acroosteolysis (1).

Case Report

A 40-year-old woman presented with fragility of three fingernails of her dominant hand (Fig. 1). On clinical examination, the left index and ring fingernails showed a v-shaped incision and lamellar onychoschizia of the lateral portion of the distal margin. This was associated with a considerable thinning and wearing down of the ring fingernail, which had a shiny surface indicating repetitive friction. The left little fingernail was kept long, and because its distal portion was broken and onycholytic, the patient used to apply a resin glue (Attack[®], Henkel spa, Milan, Italy) to increase its strength and resistance to trauma.

The patient had been a professional violist (viola player) for 27 years, but had been suffering from this nail problem for just 3 years, from the time when she had started to perform much more frequently than before.

Discussion

Musicians are subject to many traumatic skin and nail problems from playing their instruments (2). Fiddler's neck commonly affects violin or viola players (3). Acroosteolysis of the distal fingers can occur in guitar players (1). The movements necessary to play the various instruments explain the different clinical features of occupational traumatic nail dystrophies in musicians (2–4).



Fig. 1. The patients fingernails.

Our patient presented with an occupational nail fragility due to the repeated microtraumas of the nails on the strings. The clinical features correlate with the fingers used to play the strings of the instrument. To play the viola, one must in fact make a repetitive compression and plucking of the strings with the distal portion of the fingers, using especially the nails.

The occupational origin of the nail dystrophies in our patient is further confirmed by the appearance of the symptoms in parallel with her increased frequency of viola playing.

The chemical composition and physical structure of the nail plate make it remarkably resistant to exogenous trauma. However, because the nail plate is a dead structure, each successive damage to its structure cannot be repaired and is added to that before rendering the nail plate more and more weak. Nail brittleness and worn-down nails are the possible consequences of repetitive chemical or mechanical damage to the nails (5).

We suggested that our patient wear sculptured nails in order to limit trauma to the nail plate and to be able to continue to play her viola. Although needing to have her sculptured nails maintained every 2 weeks, the patient was able to continue with her profession.

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Allergic contact dermatitis from gold on a hearing-aid mould

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Key words: allergic contact dermatitis; children; gold; hearing aid.

Case Report

A 13-year-old girl, with a past history of flexural atopic eczema and profound sensorineural deafness, presented with a 3-year history of an ill-defined, itchy, exudative, scaly, erythematous rash in her right concha, extending over the tragus and preauricular skin (Fig. 1). Within her

right ear she wore a hearing-aid with a silicon mould, and, although this was substituted with a plastic and then a gold-plated mould (Fig. 2), the eczema persisted. She wore 9-carat gold earrings but had not noted any eczema over the earlobes; however, she developed eczema on the underlying skin after wearing 9-carat gold rings and a metal-backed wristwatch. There was no history of dental gold.

The patient was patch tested to an extended standard series, a plastics and glues series, scrapings of plastic hearing-aid moulds and 0.5% gold sodium thiosulfate (GSTS) in petrolatum. She gave a positive (+) reaction on days 2 and 4 to –0.5% GSTS (this was repeatable), as well as positive reactions to nickel, cobalt and the plastic mould that she had worn. The patch tests were otherwise negative. Testing of the gold hearing-aid mould with dimethylglyoxime for the presence of nickel was negative. We did not proceed further to identify the allergen in the plastic mould.



Fig. 1. Ill-defined erythematous scaly rash within the concha, extending over the preauricular skin, with sparing over the lobe.



Fig. 2. Gold-plated, hearing-aid mould.

She was diagnosed as having allergic contact dermatitis from her gold-plated and plastic moulds, and changed to an alternative plastic mould that had been negative on patch testing. Two months later the eczema had completely resolved, and it has not recurred since.

Discussion

Gold is a relatively inert metal with low solubility and because of these qualities gold plating is applied to hearing-aid moulds when an allergic contact dermatitis from the mould is suspected. It has been demonstrated, however, that artificial sweat is capable of dissolving small amounts of gold from gold alloys forming complex ions in solution (1) which could, it is proposed, induce contact sensitization.

There is a female preponderance in positive patch tests to GSTS, and at least eight cases of this have occurred following ear piercing (2). This may have been the precipitant in our patient. Allergy to other metals used

in gold alloys has also been demonstrated in other patients with GSTS allergy; although this may simply be a reflection of jewellery wearing, it may alternatively be a predisposing factor for the development of allergic contact dermatitis from gold, due to prolonged close contact between inflamed skin and released gold salts.

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Severe irritant contact dermatitis from Cypress spurge

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Key words: irritant contact dermatitis; Cyprus spurge; *Euphorbia cyparissias*; plants.

Introduction

The incidence of plant dermatitis varies from country to country and depends on the locally resident plants and the customs of human life. A number of indoor plants cause dermatitis of different types (allergic, irritant and phototoxic) among housewives. Often, the cutaneous reaction is acute (1) and may present as a light-aggravated contact dermatitis (2).

Euphorbiaceae are a large family of perennial spurge in dry areas of Iran. They contain large amounts of strongly irritant milky latex, which causes a vesiculobullous eruption upon contact with skin. The eruption is often misdiagnosed as phototoxic (3). Such plants were used from ancient times as depilatories or for the removal of warts and freckles. The substances responsible for irritancy are diterpene esters, mainly ingenol derivatives (4).

Case Report

A 42-year-old tribal woman sought medical advice in September 1999 because of the sudden onset of large inflamed areas with haemorrhagic bullae on her face and hands (Fig. 1). Her present illness had begun 12 hr after exposure to *Euphorbia cyparissias* (Fig. 2), when she was gathering its bushes for herds. In view of her severe condition resembling second to third degree burns, she was admitted to the dermatology ward of our hospital in Isfahan.

Wet dressings with saline and topical silver sulfadiazine were applied on her lesions 2× daily. She improved after 2 weeks, but the residual hypertrophic scarring was unpleasant for her. So, she was referred to our Department of Reconstructive Surgery and skin



Fig. 1. Severe necrotic, ulcerated lesions on sun-exposed areas 3 days after exposure.



Fig. 2. *Euphorbia cyparissias* (Cypress spurge) in natural form.

Discussion

grafting was performed. Her facial appearance 6 weeks after the operation became acceptable once more to her family (Fig. 3).

Plant dermatitis is easily confused with other causes of contact dermatitis. Some plants, especially celery, limes and oranges, have photosensi-



Fig. 3. Same patient's appearance, 6 weeks after skin graft surgery.

tizing compounds which, after being activated by ultraviolet light, make the skin look burnt (5).

In the acute stages, it is characterized by erythema; and in the chronic phase, hyperpigmentation may develop at the contact site (6). The Euphorbiaceae comprise about 680 species throughout the world. The best-known representatives include *Euphorbia cyparissias* (Cypress spurge) as was the cause in our patient. Usually, the plant is avoided by grazing animals, because it can lead to poisoning. For humans, it is particularly the fresh white latex of *Euphorbia* species that is dangerous to children or adults who come into contact with it (7).

The substances responsible are irritant and co-carcinogenic diterpene esters. The *Euphorbia* genus usually has irritant activity towards the skin (4). Interestingly, there are seasonal variations in the effects; while in the USA the latex has its highest irritancy in August and September, it is inactive in April and May (8).

The development of individual symptoms depends on the amount of latex and the duration of contact with the skin. Working in hot climates and abrasions from spines or hairy appendages on the plant can intensify the reaction. The initial symptoms (redness and oedema of the affected parts) usually occur after 2–8 hr, and within 3–4 days the inflammatory reactions fade (9).

If taken orally, latex results in painful stomatitis, severe gastroenteritis and diarrhoea (7). However, because of the unpleasant burning taste, it is rare that large amounts of latex or plant material are eaten. In the case of contact with the eyes, severe keratoconjunctivitis, which may end in human blindness, can occur (7).

In this patient, the cutaneous involvement was very severe, and this was the reason that she developed disfiguring scarring. The other point is that the condition was so similar to a phototoxic reaction, while *Euphorbia cyparissias* contains no phototoxic chemicals, allowing such a reaction to be named pseudophytophotodermatitis.

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Curcumin allergy in relation to yellow chlorhexidine solution used for skin disinfection prior to surgery

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Key words: allergic contact dermatitis; chlorhexidine; contact allergy; *Curcuma longa*; curcumin; disinfection; turmeric.

Turmeric/curcumin is made from the root of *Curcuma longa*, a medicinal plant of the ginger family. Curcumin has widespread use; it is used in food products as a colouring material in curry, mustard, rice, margarine, butter, cheese, candies and liqueurs (1). It is also used in cosmetology as a hair dye and is traditionally applied on the skin by married Indian women to reduce hair growth (2). There is research going on indicating curcumin as a possible anti-cancer agent (3). Curcumin is also used to colour the chlorhexidine solution used for disinfection prior to surgery.

Case Reports

Case no. 1

A 53-year-old man developed acute contact dermatitis in connection with orthopaedic surgery. Yellow-coloured chlorhexidine solution had been used for skin disinfection prior to surgery. The chlorhexidine solution contained per 100 g: chlorhexidine digluconate 500 mg, curcumin (e100) 50 mg and ethanol 83%. The eczema was restricted to the area exposed to the coloured chlorhexidine solution and was treated successfully with topical corticosteroid.

After the eczema had disappeared, the patient was patch tested with the European standard series, a supplementary standard series and curcumin in petrolatum at 1% and in ethanol at 0.05%. Both tests with curcumin showed a ++ reaction at D2 and D4. Additionally, a ++ reaction to Myroxylon pereirae resin and a ++ reaction to isoeugenol 1% with sorbitan sesquileate were found. No reaction to chlorhexidine gluconate or chlorhexidine acetate appeared. It was concluded that the contact dermatitis was due to curcumin allergy.

Case no. 2

A 56-year-old woman developed itchy eczema around a jugular-venous catheter that she had had for 10 weeks, used for hemodialysis. The catheter had been disinfected several times with yellow-coloured chlorhexidine solution. Patch tests with the European standard series, a supplementary standard series and curcumin showed a + reaction to curcumin 1% in petrolatum and a +++ reaction to curcumin 0.05% in ethanol at D4 as well as a + reaction to curcumin-coloured chlorhexidine, which was also applied as a patch test. By the

2nd reading, a follicular reaction to chlorhexidine acetate had appeared. Furthermore, there was a follicular reaction to nickel. It was concluded that the eczema was due to curcumin allergy and that there was additionally a doubtful allergy to chlorhexidine.

Discussion

At the Dermatological Department at Gentofte Hospital, patients with contact dermatitis in relation to anaesthesia or surgery have been patch tested with curcumin since April 2003. All such patients have been tested with curcumin 1% in petrolatum and 0.05% in ethanol. The concentration in the yellow chlorhexidine solution is 0.05%. In total, 25 patients have been tested and, among these, 2 have had a positive patch test reaction to curcumin (the cases described above).

Other cases of contact dermatitis caused by curcumin have previously been reported. Goh et al. (2) described a spice miller who developed dermatitis on the hands caused by curry powder and *Curcuma longa*; he had a positive patch test to *Curcuma longa* 25% in petrolatum. Hata et al. (4) described a woman who developed erythema, papules and vesicles on the dorsa of her hands after applying a medicament containing *Curcuma longa* on the skin. She had positive patch tests to curcumin 1%, 0.5% and 0.1% in petrolatum. Kiec-Swierczynska et al. (5) described a pasta worker who developed acute contact dermatitis of the hands and forearms due to the yellow colour, curcumin, in the pasta that she handled. She had positive patch tests to curcumin 1%, 0.1%, 0.01% and 0.001% in petrolatum.

Contact dermatitis caused by curcumin in relation to chlorhexidine used for disinfection prior to surgery has not been reported before. It is important, in the investigation of contact allergy related to yellow-coloured chlorhexidine, to be aware of possible contact allergy not only to chlorhexidine, but also to curcumin, the yellow colour in the solution.

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Erythema multiforme associated with probable contact dermatitis from epichlorohydrin

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Key words: allergic contact dermatitis; chemical industry; erythema multiforme; occupational.

Case Report

A 48-year-old chemical engineer presented with the history of direct skin contact with a chemical solution at work 9 days earlier. He had developed pruritic erythematous coalescent papules and plaques on his legs along the distribution of the chemical exposure. He was diagnosed clinically as having allergic contact dermatitis and treated with clobetasol propionate foam. 2 days later, he returned complaining of fever, malaise and spread of the rash. On examination, he had large violaceous flaccid bullae at the site of the original lesions and had developed new erythematous plaques on his feet, thighs, right arm, face and scalp. A

biopsy showed prominent epidermal injury with numerous apoptotic keratinocytes and lymphocytes along the basal layer of the epidermis, consistent with erythema multiforme. The patient was admitted to the inpatient dermatology service.

On the day after admission, the erythematous plaques transformed into characteristically targetoid erythema multiforme lesions. Furthermore, new lesions continued to develop and eventually involved more than 90% of his skin. Oral and ocular mucosae remained normal. All lesions eventually formed painless bullae and ruptured. Fungal, bacterial and viral cultures/serologies were negative. The patient was prescribed 60 mg of oral prednisone daily and topical triamcinolone ointment. He was discharged 4 days after admission. 7 weeks after the exposure, all lesions had healed without scarring.

Discussion

There are multiple case reports of erythema multiforme associated with contact dermatitis after exposure to plant allergens such as poison ivy; such an association has also been reported after exposure to chemical allergens (e.g. nickel, bromofluorene, colophonium, topical corticosteroids and fragrance) (1, 2).

Our patient was exposed to a liquid mixture of different chemicals including perfluoroalkyl iodides, dimethylaminopropylamine, allyl alcohol, potassium chloride and epichlorohydrin. Epichlorohydrin is used in epoxy resin manufacturing, is a potent sensitizer and an important cause of occupational contact dermatitis (3). Our patient recalled having had urticaria after exposure to epichlorohydrin, which suggests that he had been previously sensitized to epichlorohydrin. However, his severe reaction dissuaded us from patch testing to confirm epichlorohydrin sensitization.

Although the mechanism linking contact dermatitis to erythema multiforme is not understood, contact dermatitis as a potential cause of erythema multiforme should always be considered.

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Allergic contact dermatitis due to 1,3-butylene glycol in medicaments

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Key words: allergic contact dermatitis; 1,3-butanediol; 1,3-butylene glycol; medicaments.

Case Report

A 69-year-old woman applied Nizoral[®] antifungal cream containing ketoconazole (Janssen Pharmaceutical K.K., Tokyo, Japan) to her macerated toe webs for 3 months. Suddenly, pruritic erythema developed on and around the toe webs. We suspected allergic contact dermatitis caused by the antifungal cream.

Patch testing was carried out with the following antifungal medicaments: Nizoral[®] cream, Zefnart[®] cream containing liranafate (Torii

Pharmaceutical Co. Ltd, Tokyo, Japan), Lamisil[®] cream containing terbinafine hydrochloride (Novartis Pharma K.K., Tokyo, Japan), Pekiron[®] cream containing amorolfine hydrochloride (Kyorin Pharmaceutical Co. Ltd, Tokyo, Japan), Mentax[®] lotion containing butenafine hydrochloride (Kaken Pharmaceutical Co. Ltd, Tokyo, Japan) and pet. Positive reactions were observed for Nizoral[®] cream and Zefnart[®] cream at D2(+) and D4(+). To identify the precise allergen(s), further patch testing was carried out with ingredients provided by the manufacturers. 1,3-butylene glycol (1,3-butanediol) 5% aq. was positive on D2(+) and D4(+). Nizoral[®] and Zefnart[®] creams both contain 1,3-butylene glycol.

Discussion

1,3-butylene glycol is widely used in cosmetics and topical medicaments as a humectant, an antibacterial and a solvent. It is a low-irritant, low-toxicity substance and a rare sensitizer, although some cases of allergic contact dermatitis from cosmetics (1–4), including sunscreens (5), have been reported. 1 case of occupational allergic contact dermatitis, in a cosmetics factory worker, was also reported (6). 2 large group studies found allergic reactions to 1,3-butylene glycol in 4 of 364 individuals (2), and 1 of 272 individuals (7), respectively. However, this is the 1st reported case of allergy to 1,3-butylene glycol in medicaments.

The present case of allergic contact dermatitis apparently occurred during the treatment for fungal infection. Although it is a rare sensitizer, absorption of 1,3-butylene glycol may have been facilitated through the macerated, eroded toe webs, inducing contact sensitization. As 1,3-butylene glycol is widely used in both medicaments and cosmetics, allergic reactions to it may be more common than is generally realized.

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Contact dermatitis from turpentine in a painter

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Key words: allergic contact dermatitis; artist; hand dermatitis; oil painting; turpentine.

Case Report

A 59-year-old artist was referred with a 2-year history of dermatitis on his left hand. It had started on the ring finger with itching and blistering. On examination, he had hyperkeratotic scaly eczema on the left hand with sparing of the central palm. Subsequently, he also developed mild eczema on the right hand. He is right-handed, and there is no past history of skin diseases.

The patient is an artist who uses water and oil paints as well as linseed oil and oil of turpentine to dilute

paints and clean brushes. Further questioning revealed that he held a cloth in his left hand to clean his brushes between strokes.

The patient was patch tested to the European standard series and his own materials, including oil paints, linseed oil, white spirit, fresh turpentine 0.3% in pet. and used turpentine 10% in olive oil. Readings on D2 and D4 were +++ for used turpentine and ++ for methylchloroisothiazolinone/methylisothiazolinone (MCI/MI).

Discussion

Turpentine oil is an oleoresin obtained from pine trees, and its composition varies with the country of origin. When allowed to stand and be exposed to light, turpentine acts both as a sensitizer and an irritant. Oxidation of the main sensitizer delta-3-carene (except in Chinese turpentine) results in the formation of delta-3-carene hydroperoxide and the irritants in the formation of formic acid and aldehydes. Other components such as pinene and limonene (dipentene) are deemed less allergenic. It is therefore important to include both fresh and oxidized turpentine in the patch test series.

Contact allergy to oil of turpentine is considered to have become rare. In the past, occupational dermatitis from turpentine was well known in painters and decorators, mechanics and shoe repairers (1). Turpentine has been widely replaced with cheaper substitutes such as petroleum-based white spirit. However, it remains relevant in some occupations such as in the perfume industry and pottery workers (2).

Over the last few years, increased rates of turpentine sensitization have been reported, especially in elderly women who commonly develop symptoms on the face and legs (3). Medicaments for external use and cosmetics are implicated. Turpentine is an ingredient in a variety of over-the-counter preparations such as cold remedies and liniments (1). It can also be present in shoes, floor and furniture polishes, adhesives, varnishes, sealing wax and paint thinners. In addition, turpentine may cross-react with the oils in orange peel and other essential oils, ragweed oleoresin, chrysanthemum, pyrethrum, peppermint, tea tree oil and the balsams of pine, spruce and Peru.

Turpentine appears to be associated with a high frequency of concomitant allergies. Treudler et al. (3) reported a contact allergy to MCI/MI in 9.5% of turpentine-positive patients compared to 2.3% in turpentine-negative patients. MCI/MI is used as a preservative and biocide in cosmetic and industrial products such as latex emulsions. Allergic contact dermatitis of the hands in an oil painter has been reported previously (4). This patient reacted to turpentine as well as to epoxy resin in varnish.

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Occupational protein contact dermatitis from milk proteins

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Key words: cheese factory; milk proteins; occupational; protein contact dermatitis.

A 43-year-old man, with no personal history of atopy, who had been working in a cheese factory for 12 years, complained of about 4 months of itchy erythema on the hands and forearms and then on the thighs and abdomen. Such lesions arose 30–45 min after beginning work and cleared in 30 min when he stopped working. While working, he had skin contact with cheese curdle and serum and hemp cloth soaked with serum and curdle. He did not wear gloves.

Prick tests (Lofarma, Milano, Italy) were performed with moulds and milk proteins, and they gave positive reactions for betalactoglobulin (+++) and lactalbumin (+++). The patient was then submitted to scratch tests according to Lovell (1) with cheese curdle and serum. After 20 min, he showed a positive reaction (erythema, oedema and itching), where both curdle and cheese serum were applied.

Discussion

The clinical picture, positive work correlation and results of allergological tests confirmed the diagnosis of occupational protein contact dermatitis. Contact dermatitis from animal and vegetable proteins has been reported with increasing frequency,

particularly in the foodstuff industry (2–6), but standardized diagnostic criteria are not yet available. This case seems to confirm that both prick tests and scratch tests are useful for diagnosis, though in our experience (12 cases of protein contact dermatitis), and according to recent data (3), scratch tests seem to be characterized by more specificity.

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